NEW EQUIPMENT DIGEST

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CHECK AND PASS ALONG

✓	NAME	See No.

Use Inquiry Slips—Pages 8 and 72

EQUIPMENT • MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

INDUSTRIAL ENGRAVING EQUIPMENT
designed for quick easy operation

Lettering, numbering and designs can be engraved on nameplates, instrument panels, knobs, dials, lenses, etc. by line of portable and bench type engraving machines. They can be used on all metals from softest alloy to stainless steel and on any type of plastic. They operate on tracer-guided principle whereby grooved master template is traced and design reproduced in many adjustable sizes. Machines can be used also for interior contour milling, profiling, slotting and layout work. Made by **New Hermes, Inc.**, Dept. 26, 13-19 University Place, New York 3, N. Y.

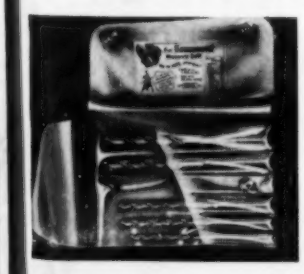
▲ For more details circle **NED-2300** on enclosed inquiry slip ▲

MULTIPURPOSE HAND PADS
have improved snap-fastened straps

Made of heavy horsehide, GS Safti-Mitt multipurpose hand pads are adjustable to any size and are designed to prevent hand injuries. They are recommended for handling brick, tile, metal sheets, stampings, sharp-edged castings, cartons and cases. Adjustable leather strap and snap-fastener assure ease of wearing and removal. Made by **General Scientific Equipment Co.**, 2701 W. Huntingdon St., Philadelphia 32, Pa.

▲ For more details circle **NED-2301** on enclosed inquiry slip ▲

TWIST TYPE MASONRY DRILLS
have vacuum-sintered carbide blades



Angled cutting point which practically eliminates motionless 'dead center' gives these cemented carbide masonry drills ample biting power and full operating effectiveness. Spiral which cleans out dust at accelerated rate assures complete hole cleaning and permits continuous drilling without dust accumulation to overload or stall power drill. Made in 12 sizes from ¼ to 1-in. in increments of 1/16-in., drills fit standard rotary electric drills. They can be used on all forms of masonry and other nonmetallic construction materials. Illustrated clear plastic kit contains five most widely used sizes. Made by **Kennametal Inc.**, 171 Lloyd Ave., Latrobe, Pa.

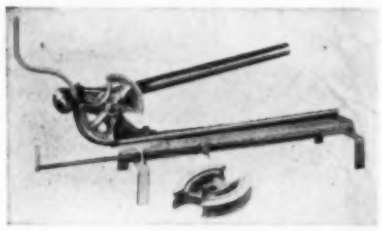
▲ For more details circle **NED-2302** on enclosed inquiry slip ▲

ALL-PURPOSE SHOP BOX
each end has rigid handle

Recommended for general shop usage, this style 600 stacking box is of all-welded construction and has sturdy handle and hook hole on each end. It is designed to stack with style 500 stacking bin of same length and width. Heavy skids act as positive stacking lock and reinforce box at point of maximum wear. Made by **Bay Metal Products**, 3009 N. Sixteenth St., Philadelphia 32, Pa.

▲ For more details circle **NED-2303** on enclosed inquiry slip ▲

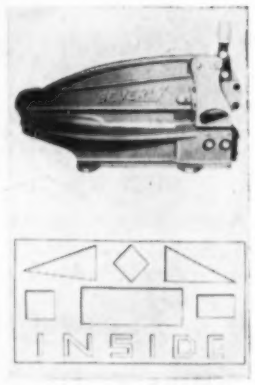
TUBE BENDING DEVICE
makes uniform bends to any degree



Any number of bends of any type including offsets in ½ and ¾-in. rigid, EMT thin wall or aluminum conduit can be made quickly by Tal Handy-Bendy device. Incorporating measuring gage and bend degree indicator, it produces precision bends without special adjustments. Made from lightweight metal, it weighs only 30 lb yet is strong and rigid. Made by **Tal Bender, Inc.**, Dept. 4, 417 N. Water St., Milwaukee, Wis.

▲ For more details circle **NED-2304** on enclosed inquiry slip ▲

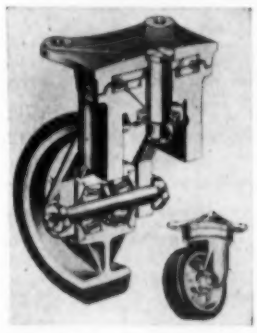
PORTABLE SLOTTING TOOL
will shear up to 16-gage mild steel



Slot measuring 2½ x ⅛-in. wide and 8 in. from edge of sheet can be cut at one stroke of this portable hand-operated Inside Slotter. Machine is made of high strength aluminum alloy, measures 18 x 9¼ in. and weighs 17½ lb. Punch and die arrangement of five high-carbon high-chrome cutting blades permits work of punch press accuracy. Four lower blades arranged in rectangular shape form die and provide support for shearing action of upper blade as it is brought through metal and into cavity formed by lower blades. Blades are adjustable to compensate for wear and various thicknesses of metal being cut. If desired, continuous cut can be made on unit during which work can be pivoted at any point of stroke. Made by **Beverly Shear Mfg. Co.**, 3001 W. 111th St., Chicago 43, Ill.

▲ For more details circle **NED-2305** on enclosed inquiry slip ▲

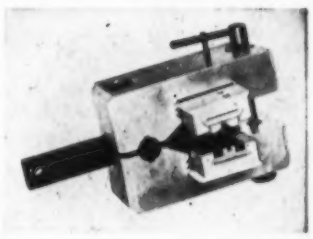
TRAILER WHEELS & CASTERS
heavy-duty type for towed equipment



Available with both rigid and swivel casters, these heavy-duty industrial trailer wheels are cast of aluminum alloy and are designed to minimize clutch wear, battery strain and mechanical fatigue on power towing equipment. Wheels and casters can be obtained in four different mountings: caster mount, inside mount, outside mount and stub axle outside mount. Features include sensitive swiveling action, lifetime sealed-in lubrication and permanently adjusted kingpin of 1¼-in. chrome molybdenum steel. Timken or Bower tapered roller bearings of largest possible size in relation to specified wheel diameter are used to provide easy starting and smooth rolling. Made by **Aerol Co.**, Dept. 250-G, 2820 Ontario St., Burbank, Calif.

▲ For more details circle **NED-2310** on enclosed inquiry slip ▲

EXTERNAL HONE
can be used with all metals



Covering diameter range of ⅛ to 2¾ in., line of honing tools is useful for sizing and finishing external diameters on fuel injection plungers, hydraulic pistons and valves, ejector pins for dies, spindles and shafts, arbors, plug gages and other parts requiring accurate size and smooth finish. Long stone life, fast stock removal, correction of clover leaf patterns, avoidance of 'washout' around ports and lands, and correction of rainbow warpage are among advantages. Dimensional accuracy can be held within 0.0001-in. Tools have machined aluminum housing, micrometer feed-up, fingertip control and steel arm to absorb torque. Made by **Sunnen Products Co.**, 8001 Manchester, St. Louis 17, Mo.

▲ For more details circle **NED-2311** on enclosed inquiry slip ▲

DO YOU KNOW? Commercial uses for costly, little-known gallium metal are wanted. Presently priced $1300 per pound, it melts when held in the hand, has relatively short radioactive life in isotopic form, and has melting point of 85° F and boiling point of 3500° F. Small quantities are available for research. Made by **Eagle-Picher Co.**, Dept. NED, American Bldg., Cincinnati 1, O.

▲ For more details circle **NED-2306** on enclosed inquiry slip ▲

DO YOU KNOW? Millions who enjoy comics can receive pleasant safety instruction now that a new series of "Captain Marvel Lieutenants of Safety" comic booklets is being introduced. Designed for distribution by electric power companies in the interest of public safety, copies of this booklet can be obtained by writing Fawcett Publication, Inc., 67 W. 44th St., New York, N. Y.

▲ For more details circle **NED-2307** on enclosed inquiry slip ▲

DO YOU KNOW? You can get a free linear conversion table to convert inches and fractions into decimal parts of a foot. Just ask for reference table TDC-110 from Babcock & Wilcox Tube Co., Beaver Falls, Pa.

▲ For more details circle **NED-2308** on enclosed inquiry slip ▲

DO YOU KNOW? Actual samples and complete data on the new Wallingford 18-8 bright annealed stainless strip are available. Claimed to minimize production costs through elimination of need for finishing, strip is furnished in all tempers, in widths up to 15 in. and in gages from 0.005-in. to 0.070-in. Write to Wallingford Steel Co., 1007 Valley St., Wallingford, Conn.

▲ For more details circle **NED-2309** on enclosed inquiry slip ▲

DO YOU KNOW? Wired television enables you to see where you can't look. Utiliscope system consists of compact television camera and one or more receivers connected by coaxial cable. Usable in industry, research, education and commerce, this equipment affords means for continuously observing practically any operation or event. Complete details and suggested applications are depicted in bulletin 1025 which is available from Diamond Power Specialty Co., Lancaster, O.

▲ For more details circle **NED-2312** on enclosed inquiry slip ▲

DO YOU KNOW? Stainless steel, cast iron, malleable iron and SAE or other steels can be given a uniform black finish quickly and economically. Only 3 lb of chemical per gallon of water solution are required, and process employs standard equipment. Only variance from usual method is new chemical cleaner which prepares the surface of metal for blacking. Developed by A. F. Holden Co., 200 Winchester Ave., New Haven 8, Conn.

▲ For more details circle **NED-2313** on enclosed inquiry slip ▲

DO YOU KNOW? Operators of materials handling vehicles can save up to 50 per cent of their industrial tire and wheel costs by utilizing TW tire and wheel analysis service which is offered without cost or obligation. Experienced engineers will visit plants upon request and will make complete survey covering types of vehicles used, operating conditions, wheel sizes and other factors essential to determining the proper type and size of industrial tire to be used for maximum economy. Service offered by B. F. Goodrich Co., Dept. TW-25, Akron, O.

▲ For more details circle **NED-2314** on enclosed inquiry slip ▲

VALVAIR GIVES YOU . . . *any* CONTROL ASSEMBLY ON A STANDARD VALVE BODY

. . . because parts are *Interchangeable*

Cylindrical ends on all valve bodies (in respective sizes) are identical, making possible *any control assembly.* Internally, stem, spacer, packer spreader, flange end bearings, and spring are interchangeable. Save on maintenance and stock; save by paying less for valves which embody standardized parts.

★ ★ ★

Sizes: 1/4", 3/8", 1/2", 3/4", 1".

★ ★ ★

Ask for Bulletin "A-N"

VALVAIR CORPORATION • 454 Morgan Avenue, Akron 11, Ohio
AFFILIATE: SINCLAIR-COLLINS VALVE CO.

Rely Upon Valvair — 2-WAY — 3-WAY — 4-WAY

▲ For more details circle NED-2315 on enclosed inquiry slip ▲

The AUGUR MOVEMENT

NEW UNIQUE POWER TRANSMISSION
PRODUCES CONTINUOUSLY INTERRUPTED ROTATION FROM CONSTANT R. P. M. INPUT

Originally designed to perform HONING and LAPPING operations, the AUGUR MOVEMENT now has proven adaptable as either POWER TRANSMISSION or AGITATOR.

This new unit converts and reduces a constant speed input to produce a quick-reversing action that interrupts rotation of output shaft after approximately 45° of travel. Interrupting action is a short back-up motion that occurs from 7.5 to 11.5 times in one complete revolution of output shaft.

AUGUR MOVEMENT TRANSMISSIONS are available to operate at any specified RPM from any rotary power source.

APPLICATIONS: TRANSMISSION for screw-feed stokers — washing machines — rotating displays — tumbling barrels — etc. AGITATOR for plating solutions; mixing paints, varnishes, chemicals; shake-out screens and hopper feeds.

PRICES start as low as $42.50 for the smallest model.

WRITE TODAY FOR CATALOG NO. 49-1.

METAL SEAL AND PRODUCTS, INC.
21889 ST. CLAIR AVENUE
EUCLID 17, OHIO

▲ For more details circle NED-2316 on enclosed inquiry slip ▲

CUT SPRAY PAINTING COSTS

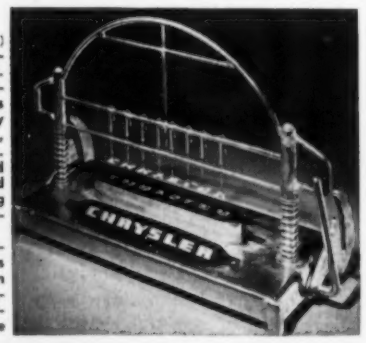
SPEED UP PRODUCTION

Often one color after another can be accurately wet painted on many concave, convex or irregularly shaped three dimensional parts. Eliminate makeshift masking devices by using our accurate, snug fitting

ELECTRO-FORMED METAL MASKS

(Made by Patented Process) Faster, better, more economical than masking tape. Clean, sharply defined letters and decorative effects are obtained on intricately designed die castings, stampings, plastics, etc. Accurate control of painted areas with no fogged edges. Avoids after-wiping or buffing off of overspray.

The "loose" inside of letters and numerals, such as "0" and "6", are held in position by arched bridging to effect perfect characters without objectionable "ties."



Can be fitted on fixtures on production lines. Used in production of hundreds of nationally known products.

Shown above is a plug-type masking fixture to plug and keep clean the depressed letters in a clear plastic automotive nameplate while painting the background. To compensate for irregularities in the molded parts the fixture is cam-locked for pressure and the plugs for each individual letter are spring-loaded.

—Send Coupon Today—

CONFORMING MATRIX CORPORATION

338 Toledo Factories Building Toledo 2, Ohio

I am interested in metal masking shields. Please send without obligation:

( ) Further information.
( ) Quotation on masks for parts (or prints) which I am forwarding.

NAME .....
FIRM .....
STREET .....
CITY & STATE .....

▲ For more details circle NED-2317 on enclosed inquiry slip ▲

Dear Reader . . .

Our prime purpose is to describe new industrial products as concisely as possible to assure the utmost economy in your reading time. We tell you in digest form what the equipment is, what it does, sizes, capacities and other pertinent data. To help you obtain any product or more information regarding its application to your specific problem, the name and address of the manufacturer are given. If you prefer, you can use the self-mailing inquiry slip which is enclosed between pages 8-9 or 72-73 of this issue. If you like our service, will you please drop me a line?

A. N. Gregg
EDITOR

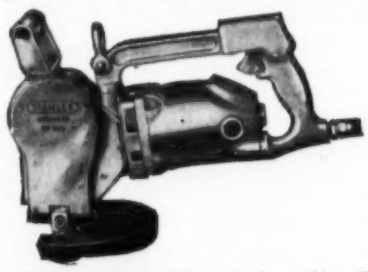
11-INCH LATHE has spindle speed of 45 to 1500 fpm

With 1-in. collet capacity, 11-in. swing and 1⅜-in. spindle hole, this relatively low priced lathe has adequate capacity for production work as well as for maintenance shops and tool rooms. Bed ways are precision ground to within 0.0005-in. of absolute lineal accuracy, and there is less than 0.0005-in. total run-out of spindle 12 in. from front bearing. Lathe is mounted on compact pedestal base with underneath drive completely enclosed. It is available in two models, No. 955 with 24 in. between centers and No. 957 with 36-in. center distance. Made by **Logan Engineering Co.,** 4904 W. Lawrence Ave., Chicago 30, Ill.

▲ For more details circle NED-2318 on enclosed inquiry slip ▲

PORTABLE ELECTRIC SHEAR cuts up to 5 fpm on straight line

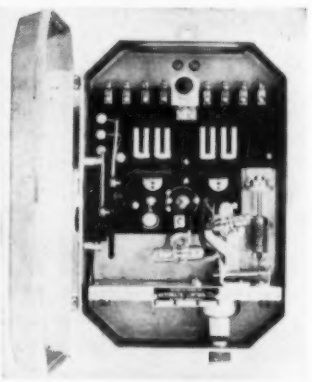
Powered by universal electric motor, this No. 206 Unishear portable electric shear can cut up to 6-gage steel plate. It is recommended for straight cutting of sheets on heavy production jobs as well as for maintenance and repair work. Blade motion feeds tool through work, and duplex handle with suspension link permits convenient gripping and easy suspension when job requires it. Tool weighs 38 lb, is of full ball-bearing construction and employs heat treated forged steel yoke. Universal 115, 230 or 250-v motors are used. Tool is furnished with armored three-wire rubber covered cable, yoke, clearance gages, wrenches and supply of lubricant. Made by **Stanley Electric Tools,** 104 Elm St., New Britain, Conn.



▲ For more details circle NED-2319 on enclosed inquiry slip ▲

PUMP PROTECTING DEVICE prevents pump from running dry

In event of mechanical failure, lowering of water table or any other cause for water not being discharged when pump is placed in operation, Protectrol unit automatically stops pump and keeps it from starting until manually reset. Emergency condition causes unit to energize audible alarm circuit and light warning lamp. Unit is equipped with alarm silencer and manual reset button which restores all circuits to regular operation. Time interval is variable through thermal time delay device. Unit can be used independently or in conjunction with controls for automatic starting and stopping of pumps and can be installed quickly on existing or new pump systems. Made by **Automatic Control Co.,** 1009 University Ave., St. Paul 4, Minn.



▲ For more details circle NED-2320 on enclosed inquiry slip ▲

Which of These LIFT GATES Will Cut Your Delivery Expense the Most?

For 8 years, thousands of operators have cut costs up to 50% with "LIFT GATES". Anthony has several types of "Lift Gates" to make possible the most efficient, economical method of loading and unloading of all types of cargo on trucks and semi-trailers.

★ **"GENERAL PURPOSE" TYPE**

For quick, easy loading at curb, low dock and floor levels. Recommended for END loading at dock. "Levelized" lift keeps gate always horizontal to handle tall objects or loads on wheels, casters or rollers. Special non-slip surface. Choice of "SPRING" or Hydraulic Power closing.

★ **"RAMP" TYPE**

Popular for ground-level loading. Bulky objects easily push up low-angle permanent ramp for fast loading and unloading. Fast action "Levelizer". Special non-slip surface that doesn't impede loading by skids or hand truck. Choice of "SPRING" or Hydraulic Power closing.

★ **"PICK UP" GATE**

For ½ and ¾ ton pick-up trucks. Twin hydraulic hoists lift up to 800 lb. loads. No cables, pulleys, cranks or chains. Operates from truck motor. Closes to act as a regular tailgate. Adds about 12% more pay load space. Phone or write for further information.

ANTHONY LIFT GATE HYDRAULIC
T. M. REG. U. S. PAT. OFF.

ANTHONY COMPANY, Dept. 407, Streator, Ill.

▲ For more details circle NED-2321 on enclosed inquiry slip ▲

BROWNING Gripbelts

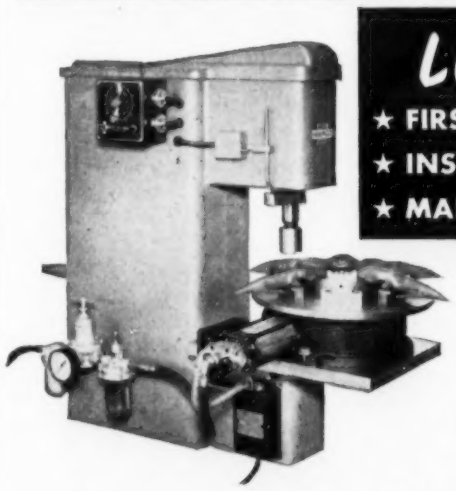
MATCHED AND SEALED FOR YOUR PROTECTION

Accurately matched to assure uniform performance and long life. Securely sealed with wire and lead slug to keep the set together until installed on the machine.

Nationwide Service—Write for the name of the BROWNING Gripbelt Distributor near you

BROWNING MANUFACTURING COMPANY
INCORPORATED
MAYSVILLE, KENTUCKY, U. S. A.

▲ For more details circle NED-2322 on enclosed inquiry slip ▲



LOW!
★ FIRST COST
★ INSTALLATION
★ MAINTENANCE

FOR —
Assembling
Staking
Trimming
Riveting

A compact, inexpensive, simple air operated Oil Hydraulic Press with only 2 moving parts. Both stroke and pressure can be accurately regulated. Non-varying hydraulic pressure is uniformly applied and not affected by stock tolerances, thus eliminating breakage. 2½ and 5 ton capacity.

Write today for Circular N49.

VISIT OUR BOOTH 951 A. S. T. E. SHOW

HAPCO HY-AIR PRODUCTS CO
Jackson, Mich.

▲ For more details circle NED-2323 on enclosed inquiry slip ▲

UNIVERSAL INDUSTRIAL CONVEYOR

Low First Cost . . . .
Low Maintenance

- Removable sides to permit handling large cartons or parts.
- Motor totally enclosed inside conveyor body easily accessible through removable ventilating panel.
- Elevates to desired height with simple hoisting mechanism.
- Driven by means of roller chain to roller bearing equipped gear box.
- Main drive shaft and idler pulley operate on double-sealed ball bearing.
- Standard belt width, 12 inches. Other widths can be furnished to meet your requirements.
- Belt speed, 74 F.P.M.—adjustable if desired.

INDUSTRIAL ENGINEERING & MFG. CO., INC.
BRIMFIELD, INDIANA, U.S.A.

▲ For more details circle NED-2324 on enclosed inquiry slip ▲

KERRIGAN Weldforged GRATING

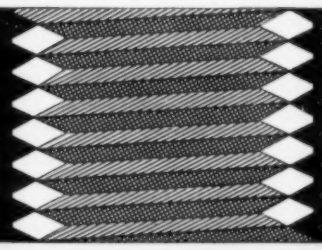
Write for illustrated catalog and name of nearest agent

The Weldforged GRATING DIVISION
of KERRIGAN IRON WORKS, INC., NASHVILLE, TENNESSEE
GENERAL SALES OFFICE, 274 MADISON AVE., N. Y. C.

▲ For more details circle NED-2325 on enclosed inquiry slip ▲

DESIGNERS CAN PREVENT SCREW THREAD TROUBLES WITH *HELI-COIL* INSERTS...

ELIMINATE screw thread problems easily and economically with Heli-Coil Inserts of precision-formed stainless steel or phosphor bronze wire. They prevent abrasion, corrosion, seizure...they permanently protect threads against wear or stripping.



Heli-Coil Inserts permit design economies by saving weight and space . . . they improve any product on which they are used. They cut labor costs . . . make assembly easier . . . put added sales appeal into the product . . . eliminate thread failures.

Use Heli-Coil Inserts in all metals, plastics, ceramics and wood.

Write today for prices and detailed information.

HELI-COIL CORPORATION
47-23 35th St., Long Island City 1, N.Y.

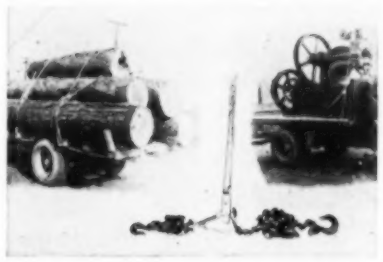
▲ For more details circle NED-2326 on enclosed inquiry slip ▲

WRAP-AROUND DRUM HEATER
is rated 3000 w on 230-v ac

Designed for heating standard 55-gal drums containing such materials as resins, plastics, oils, greases and chemicals, this type B-1 Acrawatt wrap-around drum heater is slipped over drum and held in place by clamping screws. Three stud terminals in outlet box provide connections for three-heat operation: 750, 1500 or 3000 w. Three-way rotary snap switch can be installed on outlet box cover should user so desire. Heater is 5 in. wide, fits standard 22¼-in. diameter drum, and has sheath of aluminized steel and resistor of nickel-chrome steel insulated by high grade mica. Unit lists at $19.50. Made by **Acra Industrial Electric Co.,** 3001 Ravenswood Ave., Chicago 13, Ill.

▲ For more details circle NED-2327 on enclosed inquiry slip ▲

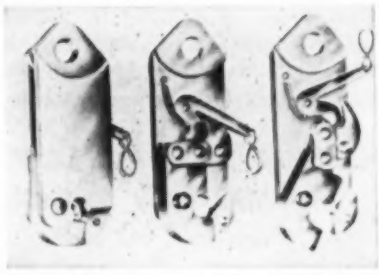
LOAD BINDER & PULLER JACK
pulls for entire chain length



Difficult moving jobs and load binding can be accomplished quickly and safely by one man with this load binder and puller jack. It can be used in any position with lever pull away from or toward load. Mechanism is designed so that it will not clog with dirt, and unit pulls for entire length of chain at one hold. It can be obtained in two models with capacities up to 5 tons. Made by **Nolan Co.,** 128 Pennsylvania St., Bowerston, O.

▲ For more details circle NED-2328 on enclosed inquiry slip ▲

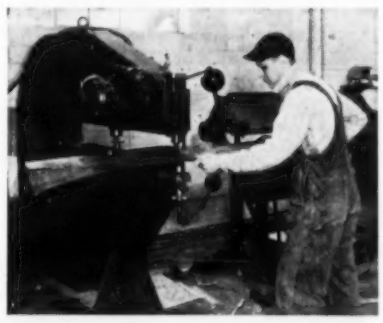
SAFETY DROP HOOK
mechanical type has 6000 lb capacity



Capable of lifting, hauling and easily releasing any weight within capacity, this safety drop hook is mechanical type using toggle action. On model shown, 40-lb pull on release lever will quickly release 3-ton load. When released, jaws automatically remain in open position for quick reloading. Side plates of hook are aluminum alloy; and load bearing hook, internal cams and levers are of high tensile steel. Total weight of unit is 2¼ lb. Made by **Coffing Hoist Co.,** 311 E. Van Buren St., Danville, Ill.

▲ For more details circle NED-2329 on enclosed inquiry slip ▲

CONTOUR SHEAR
produces smooth burr-free edges



Irregular shapes in mild or stainless steel sheets up to 3/16-in. thick can be cut by Tru-Edge shear. It can shear practically any material within its capacity such as aluminum, brass, copper and magnesium in addition to mild and stainless steel. Attachment for circle and strip cutting is provided, and machine can be used also to cut to scribed line or by template. No starting hole is required for inside cuts. With hammer type dies replacing cutting tools, machine will perform diverse beading and forming operations in steel up to ⅛-in. thick.

Machine has 48-in. throat, permits variable stroke adjustment, and is powered by 1½-hp totally enclosed ball-bearing motor operating on 220/440-v three-phase 60-cycle current. It is supplied with lamp, circle cutting attachment and one set of cutting tools. Made by **Baker Brothers, Inc.,** 1000 Post St., Toledo 10, O.

▲ For more details circle NED-2330 on enclosed inquiry slip ▲

DO YOU KNOW? Big passenger bus engines can be protected from freezing while stored outdoors overnight in cold weather without use of antifreeze. Developed in conjunction with Tropic Aire, Inc., Vapor oil-fired steam generator develops sufficient heat with 1 to 2 gal per hour of fuel oil to protect 20 buses during most severe weather. Hoses connect quickly to special fittings on vehicles, automatic controls take over, and signal warns caretaker if adjustment is needed. Made by Vapor Heating Corp., 4501 W. Sixteenth St., Chicago 23, Ill.

▲ For more details circle NED-2331 on enclosed inquiry slip ▲

Soldering Time Cut 30% with IDEAL Thermo-Grip®

By using Thermo-Grip to solder wire connections in its fluorescent fixture ballasts, Radionic Transformer Company, Chicago, reports time savings of 30%. It is also getting better connections at lower unit cost.

NEW Low-Cost Model Now Available

"Standard" 1000-Watt Model with "Plier", "Fork" and "Pencil" attachments also available.

ANY soldering job is easier and faster with IDEAL Thermo-Grip—the improved soldering method used by thousands of manufacturers to solder wires, terminals, lugs, tubing, etc. Resistance heating principle provides instant, concentrated heat — assures complete adhesion of solder. *Cheaper* — no wasted material, time or current. *Safer* — no open flame or fumes. Size for every soldering or brazing job.

Distributed Through America's Leading Wholesalers

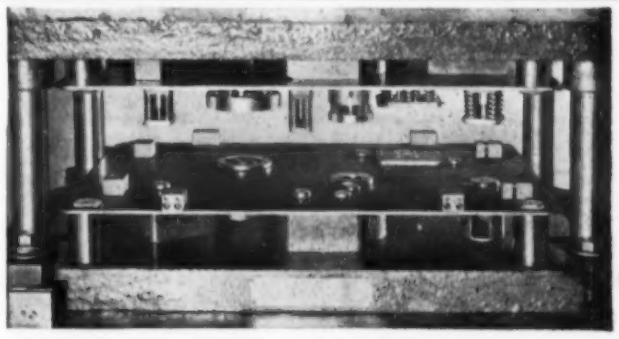
FREE TEST

IDEAL INDUSTRIES, Inc.
1032 Park Avenue
Sycamore, Illinois

Please arrange FREE Thermo-Grip demonstration and send catalog data.

NAME_____
COMPANY_____
ADDRESS_____
CITY_____ ZONE_____ STATE_____

▲ For more details circle NED-2332 on enclosed inquiry slip ▲



● Magnetic Perforating Die set-up in small inclinable punch press.

Magnetic PERFORATING DIES

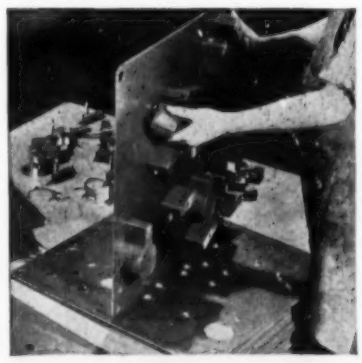
NEW and FAST
Method for perforating Sheet Metal

SAVE PRESS DOWN TIME. Approximately 15 minutes required to change from punching one subject of say 20 holes to a different 20 hole arrangement. Whistler Magnetic Perforating Dies *increase* press production.

HOLD CLOSE TOLERANCES. Hole centers may be held to .0005" accuracy or as close as can be jig bored.

GREATER PUNCH AND DIE LIFE. Concentricity of punch and die assured thus giving uniform clearance around punch, increasing punch and die life.

SAVE FLOOR SPACE. Die storage cut to a minimum because only the 2 locating templets are stored...all that is required to duplicate the set-up.



● Die retainers complete with bushings being inserted in die templet.

REDUCE DIE COSTS. Whistler Magnetic Perforating Punch and Die units are used repeatedly for different hole arrangements. When completing one job, remove all units from templet and put them into service on the next different set-up. Combine any number of hole sizes and shapes. Punch and die costs are amortized over continued re-use in many jobs.

Write for Catalog . . . Whistler Magnetic Perforating Punches and Dies have *proven* their cost-cutting advantages in many prominent plants. The catalog shows how. Send for it today.

S. B. WHISTLER & SONS, Inc.

750 MILITARY ROAD, BUFFALO 17, N. Y.

Also manufacturers of a complete line of drawing, forming, blanking and progressive dies to special requirements.

First public showing of Whistler Magnetic Dies at work—Booth 832—ASTE Convention—April 10 to 14—Philadelphia.

▲ For more details circle NED-2333 on enclosed inquiry slip ▲

For AIR DUCTS and Recirculating OVENS

Needing Temperatures From 400° F TO 1,000° F

CHROMALOX

TYPE TDH Heavy-Duty Electric HEATERS

Quickly and easily installed CHROMALOX Type-TDH Heaters give efficient, dependable heat for core drying, heat treating, annealing ovens, air ducts and similar applications. Operating temperatures up to 1000° F are easily achieved and accurately maintained by thermostats. Standard units in 6 Kw to 60 Kw ratings. An Application Engineer will show you how these and other CHROMALOX Heaters give you year round service with increased efficiency at less cost. Write today for details.

IF YOU USE HEAT

Get this Useful Booklet

Its more than 50 photographs show many time and money saving ways to use electric heat. Write today.

EDWIN L. WIEGAND CO., 7509 THOMAS BLVD., PITTSBURGH 8, PA.

See other advertisement on page 73.

CHROMALOX

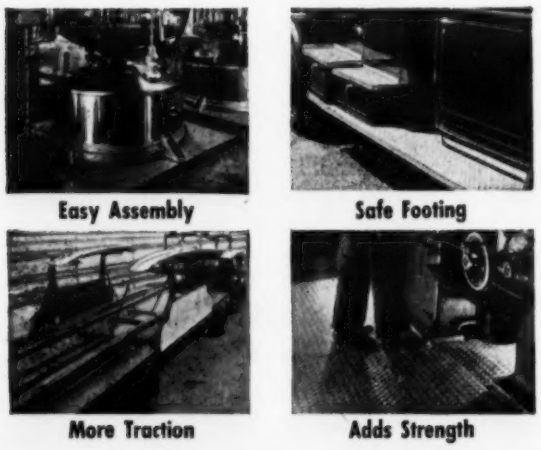
ELECTRIC HEAT FOR MODERN INDUSTRY

IB-90

For more details circle NED-2334 on enclosed inquiry slip

For greater safety under foot, in your plant and on your products

Inland 4-Way® Safety Plate



STOCKED BY LEADING STEEL WAREHOUSES

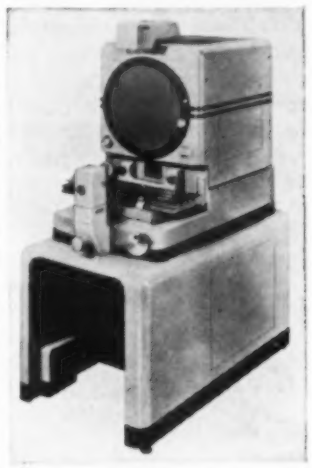
INLAND

INLAND STEEL COMPANY, Dept NED40
38 So. Dearborn St., Chicago 3, Ill.
Sales Offices: Chicago, Davenport, Detroit, Indianapolis, Kansas City, Milwaukee, New York, St. Louis and St. Paul.

New Bulletin with New Ideas—Just Out! Bulletin F1. Complete engineering and application data. Send for it!

For more details circle NED-2335 on enclosed inquiry slip

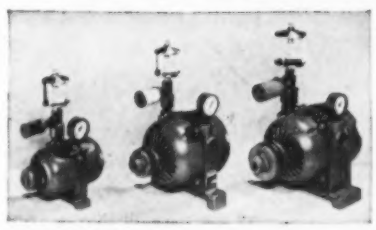
OPTICAL COMPARATOR has ample work space for staging



Regardless of degree of magnification, model 2 Kodak Contour Projector optical comparator provides 14¾ in. of working space between lamphouse and lens. In addition, work table of improved model has been enlarged to 20 in. length, and vertical travel has been increased from 2 to 4 in. Space of 8 in. is provided between object under inspection and first lens of projection system. Lamphouse can be swung down to permit surface inspection of long objects which extend far out in front of instrument. Surface projection is facilitated by mirror attachment which furnishes surface or blind hole illumination in any of five planes. Any of six magnifications ranging from 10 to 100 power can be selected quickly by means of ball-bearing mounted six-station lens turret. Made by **Eastman Kodak Co.**, Industrial Photographic Div., Dept. E, 343 State St., Rochester 4, N. Y.

For more details circle NED-2336 on enclosed inquiry slip

COMPRESSORS & PUMPS are enclosed in improved housings



Line of heavy duty vacuum pumps and rotary compressors now employs simple streamline - shaped housings. Although design is more compact, mounting dimensions have not changed; and new models are interchangeable with previous type. Features include less overall height and integral cooling fins to dissipate heat rapidly. Made by **Gast Mfg. Co.**, 115 Hinkley St., Benton Harbor, Mich.

For more details circle NED-2337 on enclosed inquiry slip

FLEXIBLE SHAFT MACHINE is especially suitable for plastics

Having forced-draft air cooling and rated at 1/15-hp, high speed motor used in 900 series flexible shaft machine provides adequate power for small-work grinding and finishing. Machines can be used hung on wall, set on bench or mounted out of way under bench. Flexible shaft runs in metal casing reinforced with strong oil-resistant neoprene, and choice of five pencil-size or larger handpieces is available. Made by **Foredom Electric Co.**, Dept. 1-A, 27 Park Place, New York 7, N. Y.

For more details circle NED-2338 on enclosed inquiry slip

SEND FOR YOUR COPY TODAY

The new Logan Conveyor book, "Key To Lower Costs" is just off the press . . . and full of valuable and interesting facts about the materials handling phase of production, shipping, etc. Illustrates typical handling solutions, shows modern conveyors "in action". Write for your copy today. There is no obligation.

Logan Conveyors

LOGAN CO., 215 CABEL ST. • LOUISVILLE 6, KY.

For more details circle NED-2339 on enclosed inquiry slip

OVER A MILLION BAY STACKING BOXES SOLD TO INDUSTRY

IMMEDIATE SHIPMENT

•

ALL PRICES F.O.B. FACTORY

•

SPECIAL FEATURES

• Reinforced Corners • Drop Handle Each End • Spotwelded Construction • Four Rivets For Extra Strength • Continuous Stacking Rim All Four Sides

SEND FOR CATALOG

Product Number	Width	Length	Height	Gauge Steel	Price Plain	Price Green
801D-18	10"	16"	6"	18	$1.80	$2.05
802D-18	12"	18"	8"	18	$2.16	$2.46
803D-18	12"	18"	6"	18	$1.94	$2.24
804D-18	10"	20"	8"	18	$2.07	$2.37

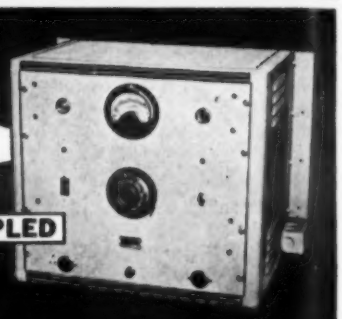
PHONE • WIRE • WRITE
Phone: BAldwin 9-1805

BAY METAL PRODUCTS

3009 N. 16th St. Philadelphia 32, Pa.

For more details circle NED-2340 on enclosed inquiry slip

NEW!



DIRECT-COUPLED Thyratron Controlled STABILIZED and REGULATED

ADJUSTABLE D. C. POWER SUPPLIES

Designed for universal industrial and laboratory use where high speed (0.05 sec.) load regulated and line stabilized heavy duty adjustable direct current power supplies are required. All models employ a new type of direct-coupled stepless control voltage correction amplifier which provides a constant DC output (within ± 0.1%) under conditions of simultaneous variation of power line from 90 to 130 volts and load from no-load to full rated output.

Models available for output currents up to 10 amperes (filtered to less than 1%) and output voltages up to 500 volts.

Write for complete technical literature and prices on 10 different models.

Industrial Division

AMPLIFIER CORP. OF AMERICA
398-15 Broadway, New York 13, N. Y.

For more details circle NED-2341 on enclosed inquiry slip

"Catsup ON YOUR ICE CREAM?"

Just because you used catsup on your steak, the waiter shouldn't assume you use it on the rest of your dinner too!

And just because one bearing is best lubricated by one particular grade of oil, you shouldn't assume that the same oil is best for *all* bearings on that machine. In many cases it isn't.

OIL CUPS permit you to lubricate each bearing with the oil best suited to that bearing—thus prolonging bearing life, reducing maintenance costs, cutting down-time, boosting production. And oil cups fortunately *cost very little*.

Gits oil cups have been the standard for industry for more than 40 years. Gits Bros. has the largest selection of oil cups available anywhere. Call on Gits Bros. for a prompt, efficient solution to your lubrication problems.

Write for free Price Guide Catalog

GITS BROS. MFG. CO.

1833 S. Kilbourn Ave. • Chicago 23, Ill.

For more details circle NED-2342 on enclosed inquiry slip

New Way to Solder!

Faster! Easier!

WASSCO GLO-MELT SOLDERING UNIT

HERE is the new, low-cost answer to better, faster soldering, silver soldering or brazing. The Wassco Glo-Melt is ideal for the finest precision work as well as the hard-to-heat heavier jobs. Select from 24 heats for exacting heat control!

Operating on the conduction principle, the Glo-Melt can be grounded directly or through a simple jig or fixture for fast, efficient production line work. A carbon "pencil" tip, held in a light hand-piece, is touched to the part and instantly glows to a red soldering heat. Flux core wire solder is applied and a perfect joint is made. The Glo-Melt is simple, fast, economical—replaces slow, antiquated soldering methods—for 1001 soldering jobs.

Write today for full information and prices on the Glo-Melt.

INQUIRIES FROM JOBBERS and REPRESENTATIVES INVITED

WASSERLEIN MFG. CO., INC.
7400 3RD AVE., NORTH, ST. PETERSBURG 6, FLORIDA

▲ For more details circle NED-2343 on enclosed inquiry slip ▲

NOW...even greater PROTECTION!

BS&B Combination Pressure-Vacuum **VENT VALVE** *plus* **FLAME ARRESTOR**

Prevent flame propogation into your atmospheric storage tanks! Now the famous BS&B VVH Pressure-Vacuum Vent Valve has been combined with an arrestor bank. Its network of capillary openings offer efficient heat radiation . . . prevent touching off vapors and fluids. Functions efficiently at highest temperatures. Vent valve protects against both overpressures and vacuum.

Will Not Freeze Shut!

Rubber to metal seating. Easily cleaned. Tight. Consult your insurance man about credit toward lower premiums. Write for literature.

BLACK, SIVALLS & BRYSON, Inc.
Section 1-854FA
720 Delaware Kansas City 6, Mo.

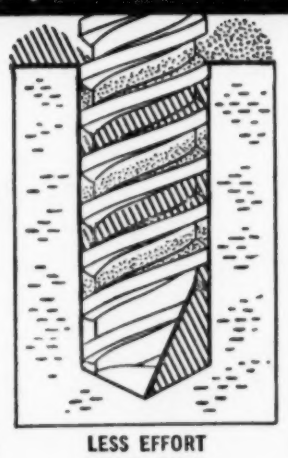
VVH Pressure-Vacuum Vent Valve-Flame Arrestor

Size Inches	Opening Pressures, Ozs. Minimum	Opening Pressures, Ozs. Maximum	Vacuum Openings Ozs.
2	0.5	1.75	0.5
3	0.5	1.75	0.5
4	0.5	1.75	0.5
6	0.5	1.75	0.5

NOTE: Pressures in these tables are for cast aluminum cover only. Pressure ratings require a manufacturing tolerance of plus or minus 5 per cent.

▲ For more details circle NED-2344 on enclosed inquiry slip ▲

Only *Cyclo-twist* Masonry Drill CARBIDE-TIPPED *has these 2 Features!*



1 Positive Double Dust Lift
Two built-in spiral channels instantly and positively lift the dust out of the hole.

2 No Hangover
The steel body has the same diameter as the carbide. This gives maximum strength to the drill and maximum support to the carbide tip.

LESS EFFORT
MORE HOLES
NO CLEANING OF HOLES NECESSARY
LOWEST COST PER HOLE

Ask your jobber or local Westinghouse Supply Company

New England CARBIDE TOOL CO., INC.
CAMBRIDGE 39, MASS.

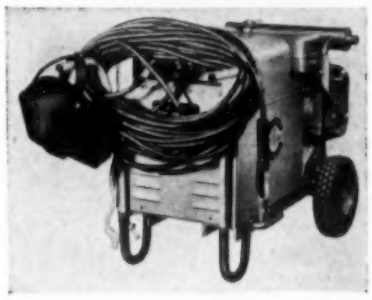
▲ For more details circle NED-2345 on enclosed inquiry slip ▲

SCREWDRIVER has built-in flashlight

Built-in flashlight of this Amberyl screwdriver illuminates screw heads obscured by shadows. Handle is constructed of breakproof, shockproof and fire-safe plastic and is designed for comfort during long periods of usage. Flashlight operates by turning knurled knob in handle dome and will remain illuminated until switched off. Bulb and regular pen light dry battery are replaceable. Screwdrivers are supplied in three sizes: model FL-24 with 1 x 3⅝-in. handle and ⅛ x 4-in. blade; model FL-34 with 1 x 3⅝-in. handle and $\frac{3}{16}$ x 5-in. blade; and model PFL-1 with $\frac{3}{16}$ x 5-in. No. 1 Phillips bit. Tool lists at $1.80. Made by **Vaco Products Co.**, 316 E. Ontario St., Chicago 11, Ill.

▲ For more details circle NED-2346 on enclosed inquiry slip ▲

WELDER & POWER PLANT in stationary and portable models

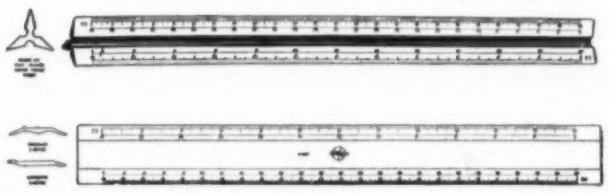


Available with or without rubber-tired truck, gasoline engine-driven unit can be used for arc welding, pipe thawing and as 3-kw power plant. For welding it will handle alternating or alternating - direct current electrodes from 1/16 to 3/16-in. and delivers 200-amp welding current. For pipe thawing, alternating current generator provides high duty cycle operation required for fast thawing. Conveniently located switch permits quick changeover to power plant to operate lights, motors and electric tools where no power lines are available or to serve as emergency power supply. Machine provides 3-kw 110/220-v 60-cycle single-phase ac. Made by **Miller Electric Mfg. Co.**, 716 S. Bounds St., Appleton, Wis.

▲ For more details circle NED-2347 on enclosed inquiry slip ▲

ALL-METAL SCALES possess good dimensional stability

Low coefficient of expansion of all-metal triangular and flat measuring scales assures permanent retention of accuracy. They are engine-engraved with needle-sharp



graduations in black against white surface background. Surfaces of triangular scales form inverted-V to bring fine measuring edges of scale down to paper without flat surfaces touching work. Models B-160 Architects' and B-161 Engineers' scales are 12-in. long and weigh approximately 4 oz. Flat scales are available in 12 and 6-in. lengths with standard scale graduations on regular two-bevel and opposite two-bevel bodies. Made by **Cal-Pan Corp.**, Dept. NED, 1111 S. Fremont Ave., Alhambra, Calif.

▲ For more details circle NED-2348 on enclosed inquiry slip ▲

ROTARY LIQUID FILLER features removable stainless tank

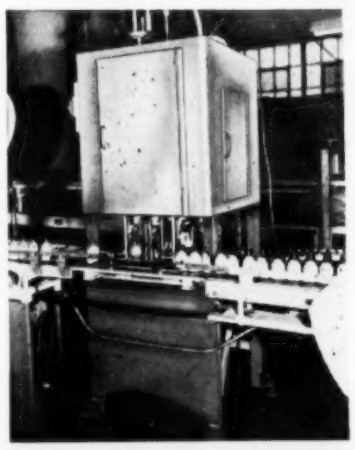


Illustration shows R-50 series twelve-spout automatic rotary liquid filling machine in pharmaceutical plant where it is filling fifty-two 4-oz glass bottles per minute with thick semiliquid. Machine is powered by overhead drive mechanism located on top of filler, has stainless steel tank that can be removed for cleaning and sterilizing and can be supplied with sanitary fittings and spouts with no exposed threads. Greater speed than that listed can be obtained through variable speed drive that is integral part of machine. Made by **MRM Co.**, 193 Berry St., Brooklyn 11, N. Y.

▲ For more details circle NED-2349 on enclosed inquiry slip ▲

GET LONGER BELT LIFE with . . .

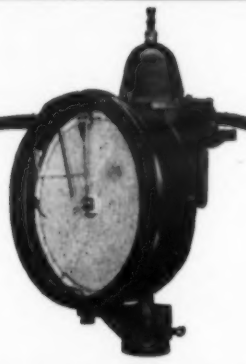
Its self-cleaning action is ideal for the handling of sand, gravel, limestone, fertilizer, salt, or any other hard, abrasive materials.

Only with Sprout-Waldron BELT-SAVER Pulleys can you expect belt life increases from 50 to 400%. Get full details on the BELT-SAVER as well as on the complete line of S-W "Blue Face" Cast Iron Pulleys today!

• WRITE FOR LITERATURE •

SPROUT-WALDRON & COMPANY
Manufacturing Engineers
8 WALDRON STREET MUNCY, PA.

▲ For more details circle NED-2350 on enclosed inquiry slip ▲



AUTOMATIC HYDROMETER
Continuously Records Densities!

Here's an invaluable aid to operating efficiency in chemical, petroleum, paper, food and other process plants. The Foxboro Liquid Density Recorder furnishes continuous, accurate records of density in flowing liquids. May be calibrated to specific gravity, density or other scales. Automatic Recording Controllers also are available.

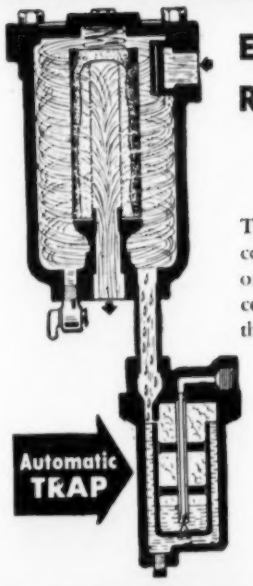
Both instruments are for permanent installation. Function without operator's attention. Accuracy is unaffected by foam. Open records easily read to small unit values.

Write for detailed Bulletin A-264. **The Foxboro Company, 134 Neponset Ave., Foxboro, Mass., U. S. A.** Branches in principal cities of U. S. and Canada.

FOXBORO Reg. U. S. Pat. Off. DENSITY RECORDERS

▲ For more details circle NED-2351 on enclosed inquiry slip ▲

Poro-Stone Filtration FOR COMPRESSED AIR



EFFICIENTLY REMOVES

OIL, WATER PIPE SCALE

The Adams *Poro-Stone* Filter gives continuous service without attention or maintenance expense. Efficient centrifugal separation *plus* diffusion through Poro-Stone, removes contamination completely without pressure loss. Automatic Trap eliminates attention and assures continuous and efficient filter operation. Write for complete data—Bulletin 105.

R. P. ADAMS CO., INC.
227 E. Park Drive • Buffalo 17, N. Y.

ADAMS *Poro-Stone* AIR FILTER

▲ For more details circle NED-2352 on enclosed inquiry slip ▲

MOLYBDENUM High Speed Steels

You should know these FACTS!

At least one type of Molybdenum high speed steel is listed and promoted, on a basis of equivalent and interchangeable performance with tungsten high speed steel, by makers of high speed steel.

Users' reports of Molybdenum high speed tools *everywhere* indicate that performance at least equals and in many cases betters that of tungsten tools.

Molybdenum high speed steels can save money in production — for proof, send for a copy of our FREE and informative booklet.

This book sent to you FREE

Climax Molybdenum Company
500 Fifth Avenue · New York City

MOLY

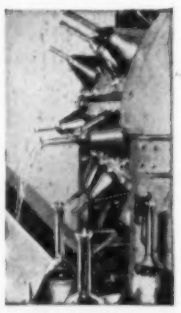
HS4

For more details circle NED-2353 on enclosed inquiry slip

A delicate Operation

Separating the yolk from the white is a delicate operation. In industry, too, cases arise requiring careful handling of the product With the engineering and fabrication at Allied a special conveyor that operates without hesitation or jerk was conceived, built and installed to convey delicate television tubes during a screen, film depositing operation.

You may have a handling peculiarity in your own plant. An Allied experienced material handling man can help you. Make an appointment with him today; phone TWinbrook 2-3040 or write *Allied Steel & Conveyors, Inc., 17326 Healy, Detroit 12, Michigan.*



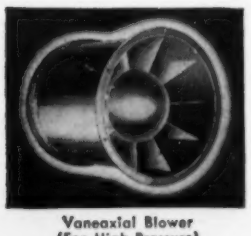
Settling Conveyor applies phosphorus deposit to television tubes.

CONVEYORS AND CONVEYOR SYSTEMS
—designed, fabricated, erected—or present systems remodeled and rearranged

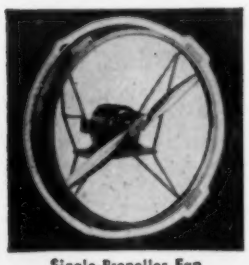
ALLIED DOES THE WHOLE JOB... from beginning to end!

For more details circle NED-2354 on enclosed inquiry slip

We'll whip your TOUGH Air-moving job



Vaneaxial Blower (For High-Pressure)



Single-Propeller Fan (For Low-Pressure)

Want to move 50,000 CFM against 4" water gauge pressure? Sure we can do it . . . with a minimum of equipment and "cluttering-up," mighty low power consumption and long, trouble-free service.

Need better ventilation? Want to break up a hot spot? Are there points of dust or fume concentration? Those are simple to remedy, but to be *sure*, precisely the correct fan or blower, of the right size and type, should be specified.

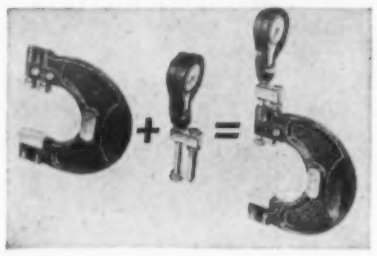
When you write to us you put the whole weight of Hartzell engineering, longest experienced in the propeller fan industry, to work on *your* air-moving job. Application directly to your needs is handled by an experienced, competent Hartzell field office near you.

Tell us the air-movement problem which is bothering you. We'll suggest the *right* remedy, with no obligation whatever to you.

HARTZELL PROPELLER FAN CO.
DIV. OF CASTLE HILLS CORP.
DEPT. G PIQUA, OHIO
ENGINEERING OFFICES IN PRINCIPAL CITIES

For more details circle NED-2355 on enclosed inquiry slip

GAGE ATTACHMENT converts snap gages to dial type



Inserted in place of two gaging pins of American Gage Design adjustable limit snap gages, Dializer device changes units into dial gages giving quantitative readings. After it is installed, it is easily adjusted by means of knurled nut. It can be clamped in final position by same locking mechanism used originally for one of gaging pins. After conversion, gage has same range of adjustment as before. Device is available for frames 1 through 6 and can be used with models A, B or C. It can be supplied reading in either 0.0001 or 0.001-in. Made by **Standard Gage Co.,** 200 Parker Ave., Poughkeepsie, N. Y.

For more details circle NED-2356 on enclosed inquiry slip

BAYONET-LOCKING SOCKETS for operation on 115-v ac circuits

These double-contact candelabra bayonet sockets are adapted for use in many types of equipment and appliances and can be assembled quickly and easily with lamps. They are especially usable as warning lights and control signals in variety of applications. Made by **Drake Mfg. Co.,** Dept. NE, 1713 W. Hubbard St., Chicago 32, Ill.

For more details circle NED-2357 on enclosed inquiry slip

RUBBERIZED FABRIC serviceable at 85 degrees below zero

Impregnated with synthetic rubber, this fabric is capable of giving useful service at extremely low temperatures. Its ability to withstand low temperature while retaining flexibility recommends it for many industrial applications such as protective covering for machines and materials. It is also being produced for use in new type exposure suit for members of the Armed Forces, with this manufacturer supplying rubberized fabric and another company making clothing. Made by **B. F. Goodrich Co.,** Dept. E, 500 S. Main St., Akron, O.

For more details circle NED-2358 on enclosed inquiry slip

PORTABLE SANDBLAST UNIT equipped with semipneumatic tires

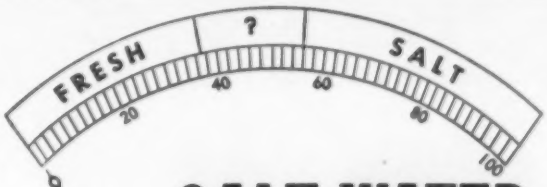
Having 100-lb abrasive capacity, model CXW portable sandblast unit is supplied with rubber-tired wheels and removable handle to expedite moving whenever necessary. Sandblast mixing valve operates on differential principle with rubber-cushioned ports that give accurate control and long wear. It is controlled by single lever at top which is accessible to operator without stopping work and will purge mixing valve instantly if it becomes clogged by moisture. Sand container is seamless drawn shell that insures maximum strength and is flanged and bolted to base to permit access to interior for inspection. Each unit is supplied with funnel and sieve, 7 ft of sand hose and 12 hardened steel nozzles. Made by **P. K. Lindsay Co.,** 101 Tileston St., Everett 49, Mass.

For more details circle NED-2359 on enclosed inquiry slip

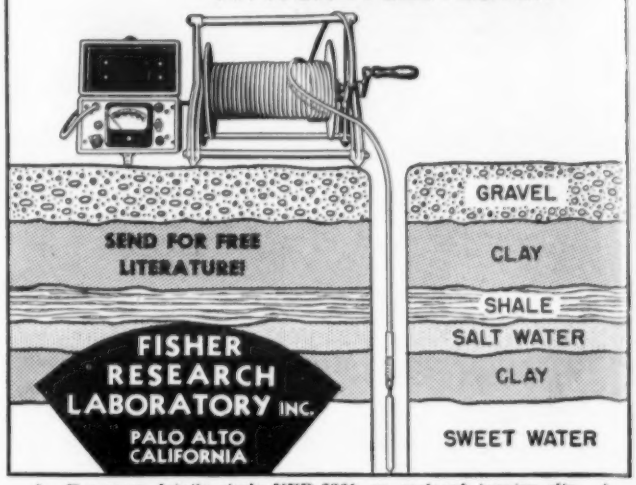
TIME DELAY AIR VALVE operates by volume measurement

Controlled by regulated air, this time delay valve assures constant repetition of time sequence. Unit is available for use on all Ross in-line operating bodies which range in size from ¼ to 1¼-in. and are furnished in straightway, three-way, normally open and normally closed models. Valve is especially adaptable for jigs, fixtures, machine tools and other applications requiring time sequence of two or more operations. Made by **Ross Operating Valve Co.,** Dept. 161, 120 E. Golden Gate Ave., Detroit 3, Mich.

For more details circle NED-2360 on enclosed inquiry slip



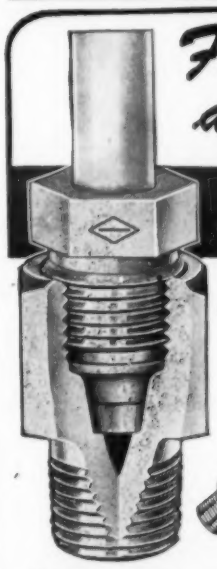
SALT WATER INFILTRATION AND THE **FISHER M-SCOPE WATER WELL TESTER**



For more details circle NED-2361 on enclosed inquiry slip

For fast, low cost assembly use the

Hi-Duty® FITTING



THE TUBE COUPLING THAT WITHSTANDS VIBRATION

EASIER AND QUICKER TO ASSEMBLE
Fitting comes with nut assembled. Simply push tube into fitting and tighten nut. No loose sleeve to contend with . . . no tube flaring required. Makes repeated tight reconnections.

MORE CAPACITY TO WITHSTAND VIBRATION
because tubing deformation is kept at a minimum. Imperial Hi-Duty Fittings withstand over 5 times as much vibration as joints made with Compression or Flared brass fittings.

For tubing from ⅛" to ¾" O.D.
Available in Brass or Aluminum
Ask for Catalog 350 and Bulletin 365 for complete information.
See Your Industrial Supply House

THE IMPERIAL BRASS MFG. CO., 510 S. Racine Ave., Chicago 7, Illinois

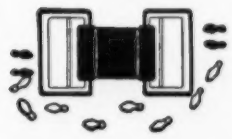
IMPERIAL
Pioneers in Tube Fittings and Tube Working Tools

For more details circle NED-2362 on enclosed inquiry slip

10" or 14" **TWIN WHEEL** WET OR DRY **TOOL GRINDER**

FOR CARBIDE STELLITE AND HIGH SPEED STEEL TOOLS

OLD WAY



Lost time between rough and finish grind.

Floor space wasted — Grinder must be away from wall.

PROMPT DELIVERY!

TYPE 10 TD TWIN WHEEL TOOL GRINDER

NEW WAY
One step from rough to finish grind.
Conserve floor space—place Grinder against the wall.

WRITE FOR BULLETIN 18 TODAY!
SEE THIS MACHINE IN OPERATION AT OUR BOOTH 965, A.S.T.E. SHOW, APRIL 10-14, PHILADELPHIA, PA.

THE STANDARD ELECTRICAL TOOL CO.
2488 RIVER ROAD CINCINNATI 4, OHIO

For more details circle NED-2363 on enclosed inquiry slip

FOTO-FLO MODEL C
PHOTO-COPYING MACHINE
New! Speedier! More Economical!

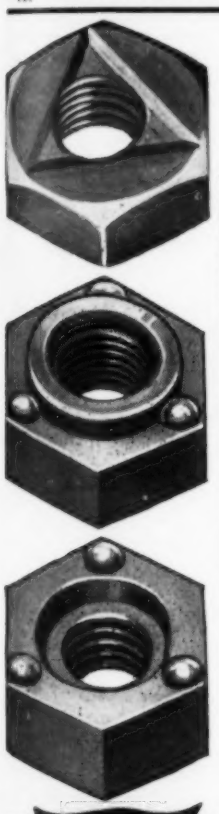
DAYLIGHT OPERATION NO DARKROOM REQUIRED

Makes Up to 5 (18" x 24") Prints a Minute of anything written, printed, drawn or photographed

WRITE DEPT. 50-105 for information showing how FOTO-FLO can speed production and lower photo-copying costs.

HALOID THE HALOID COMPANY ROCHESTER 3, NEW YORK
Branch Offices in Principal Cities
Photocopy Papers • Photo-copying Machines • Photographic Papers

▲ For more details circle NED-2364 on enclosed inquiry slip ▲



3 COST CUTTERS

Inexpensive GRIPCO LOCK NUT* —with "double-triangle" thread lock. Quick application, locks and *holds tight.* Can be re-applied many times with little loss of holding power.

Inexpensive GRIPCO "PILOT" WELD NUT† Raised collar centers the nut instantly, accurately, for quick welding. No measuring, no jigs, no time lost applying.

Inexpensive GRIPCO WELD NUT† —counterbored. Hot metal particles dislodged by welding are shunted away from threads. Bolt threads into nut without trouble or retapping.

Get samples of sizes you use compare first cost compare application cost

**Available in Stainless Steel and also Brass and other non-ferrous metals.*
†Available with standard threads or with Gripco "double-triangle" locking threads.

GRIP NUT COMPANY
308-G SO. MICHIGAN AVE., CHICAGO 4, ILL.

▲ For more details circle NED-2365 on enclosed inquiry slip ▲

LEPEL *presents* 2 *New* UNITS FOR HIGH-FREQUENCY HEATING

NEW SPARK-GAP UNIT

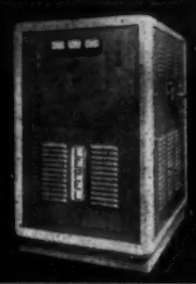
A completely redesigned unit available in 7½, 15 and 30 KW input ratings. All-steel housing . . . with interiors of the latest fire-resistant materials. Convenient operating controls . . . modern appearance.

Unit can be used for heating or melting without matching transformers or condensers. Delivers full rated output when treating ferrous or non-ferrous materials. Minimum power and water consumption.

NEW VACUUM-TUBE UNIT

The last word in high frequency heating equipment of the electronic tube type, incorporating the latest improvements in its all-steel housing.

Effectively heats ferrous or non-ferrous metals for hardening, soldering, brazing, or melting applications. Easily adjusted to any load . . . does not require matching transformers or condensers. Minimum power and water consumption. Units conservatively rated at 5, 10, 20, and 40 KW output.



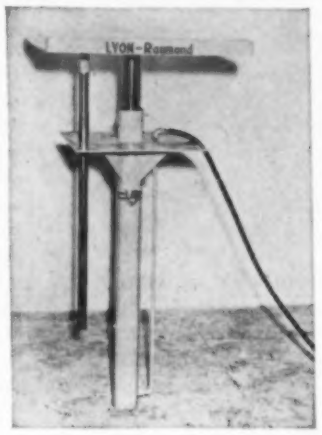
HARDEN SOLDER **Lepel** HIGH FREQUENCY HEATING UNITS BRAZE MELT

LEPEL HIGH FREQUENCY LABORATORIES, Inc., 39 West 60th Street, New York 23, N. Y.

Write for LEPEL Catalogue ND-4

▲ For more details circle NED-2366 on enclosed inquiry slip ▲

ELEVATING PLATFORM
uses shop air pressure for raising



Loads weighing up to 300 lb can be elevated and positioned by means of this platform which utilizes air pressure of 90 to 100 psi. Designed as package unit for installation below floor level, it requires only standard hookup to air pressure system. Measuring 30 x 30 in., platform lowers to 6 in. and elevates to 42 in. Valves can be furnished for hand or foot operation. Model shown has stop to prevent top from turning, and other units can be designed to turn 360 degrees or lock in various fixed positions. Made by **LYON-Raymond Corp.,** 4168 Madison St., Greene, N. Y.

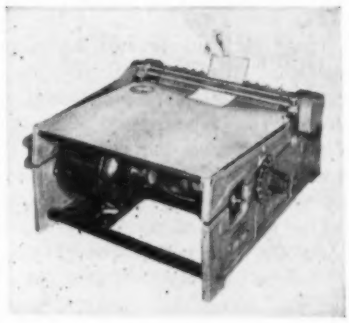
▲ For more details circle NED-2367 on enclosed inquiry slip ▲

ROTARY POWER SWEEPER
cleans 48-in. swath right up to curb

Powered by four-cycle 1½-2-hp air-cooled gasoline engine, this rotary power sweeper employs rubber bumper wheels that allow operator to roll machine along building or curb. Two vertically floating rotary brushes allow either right or left hand sweeping against any projection, and main brushes pick up all types of debris and deposit it in catcher basket. Main brushes are 15 per cent steel wire and 85 per cent Tampico inserted in 2¼ x ⅝-in. hardwood strip. Rotary brushes are Palmyra fiber and are locked on shaft to welded steel webs. Steel hoop-shaped handle controls forward and turning motion of unit. Made by **Modern Mfg. Co.,** 158 N. Fair Oaks Ave., Pasadena 1, Calif.

▲ For more details circle NED-2368 on enclosed inquiry slip ▲

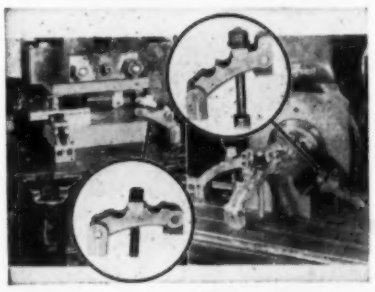
COATING & GLUING MACHINE
features slow speed tank roller



Designed for overall precision application of glue, lacquer, varnish, resins, latex and other liquid solutions, 2R series coating and gluing machine employs tank roller that can be driven at any one of four speeds. Four sizes can be obtained: 6, 9, 12 and 15 in., each supplied with heavy-duty motor. Coating tank and tank roller can be removed easily for cleaning, and nonclogging regulator assures correct amount of coating for all types of work. Coating solutions requiring heat are kept at proper temperatures with thermostatic control. All parts in contact with liquid are bronze or stainless steel. Made by **Potdevin Machine Co.,** 1285 38th St., Brooklyn 18, N. Y.

▲ For more details circle NED-2369 on enclosed inquiry slip ▲

UNIVERSAL CLAMPS
permit rapid and rigid clamping



Dies and work pieces can be fastened securely on machine tools by C & S universal clamps without necessity of blocking or shimming. Since clamps remain as complete assembly ready for instant use, they minimize change-over time for machines. Units are made of heat treated steel forgings. Back foot rests on bolster plate or machine table and is hinged to two arched members. This allows perfect alignment at any height or on any type surface. To provide clamping pressure, standard bolt passes through half-round pressure block which compensates for vertical alignment of bolt regardless of height of clamp. Tool room models employ special front foot and additional stop pin to permit clamping on round bars held in V-blocks, on narrow ledges, sloping surfaces, rough castings or smooth surfaces. Made by **Carroll & Shipley Machine Tool Products Inc.,** Dept. B, 720 W. Twelfth St., Anderson, Ind.

▲ For more details circle NED-2370 on enclosed inquiry slip ▲

Chevrolet bodies brought to chassis floor line on selective Power and Free Conveyor.

POWER AND FREE CONVEYORS

give essential selectivity of parts and units to meet varying manufacturing specifications. Write for complete Power and Free data.

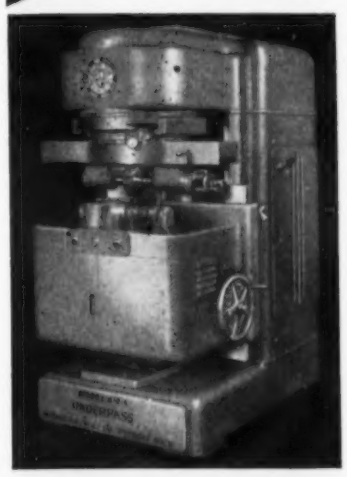
OFFICES IN PRINCIPAL CITIES
8921 ALPINE AVE.
DETROIT 4, MICH.

MANUFACTURERS OF OVERHEAD AND FLOOR TYPE CONVEYORS

▲ For more details circle NED-2371 on enclosed inquiry slip ▲

How to cut gear costs AND improve quality

"Underpass" gear shaving . . .



. . . is so fast and accurate, changeover so easy, tool costs so low.

Frequently also, *total time* for cutting *plus* shaving is *less than for cutting alone*—only 85% according to one producer who shaves 44 gear types on his two Michigan 870s:—wide and narrow gears, large and small, crowned and uncrowned—to tolerances of plus or minus 0.0001 in.

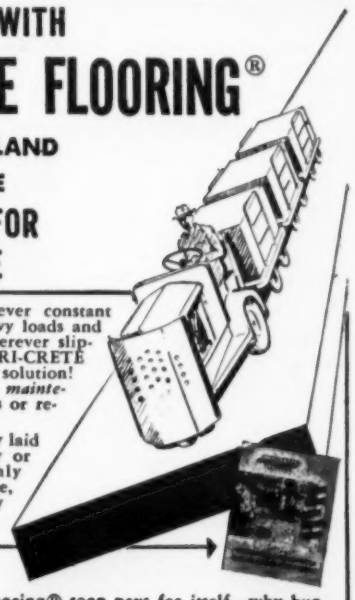
For machine details ask for Bulletin No. 870

MICHIGAN TOOL CO.
7171 E. McNICHOLS ROAD • DETROIT 12, U. S. A.

▲ For more details circle NED-2372 on enclosed inquiry slip ▲

NO MAINTENANCE WITH
EMERI-CRETE FLOORING®

MADE WITH CORTLAND EMERY AGGREGATE
DIAMOND-HARD FOR HEAVY-DUTY USE



For bruising traffic, wherever constant trucking or moving of heavy loads and equipment is necessary, wherever slipping is a hazard . . . EMERI-CRETE FLOORING® is the perfect solution! *Practically eliminates floor maintenance!* Ideal for new floors or resurfacing old floors.

EMERI-CRETE® is easily laid by your maintenance crew or local contractor using only Cortland Emery Aggregate, cement and water. Virtually indestructible.

Get FREE PROOF-POSITIVE Folder No. 601 Today.

Learn how Emeri-Crete Flooring® soon pays for itself—why hundreds of leading plants in every industry are enjoying years of maintenance-free service—*how you can make your own test of Emeri-Crete Flooring®!* Contains complete story, lists users, types of industries and many installations.

EMERI-CRETE FLOORING
Reg. U. S. Pat. Off.

WALTER MAGUIRE COMPANY, Inc., Dept. ND-4
60 East 42nd Street, New York 17, N. Y.
Name_____
Title_____
Company_____
Address_____
City_____ Zone____ State____

7743

▲ For more details circle NED-2373 on enclosed inquiry slip ▲

Be fresh... Stay fresh

wear a

DUPOR No. 4

THE RESPIRATOR FOR DUST, FUMES, PAINT SPRAY

Double filters provide easy breathing. Soft rubber face mask gives air-tight fit. Sanitary face cloth protects against dermatitis or chafing. Has patented DUPOR valves for "controlled breathing," and panorama view without blind spots. A prime favorite for years!

Sample sent

$1.65 pp

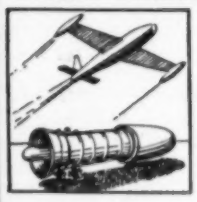
H. S. COVER, South Bend, Ind.

For more details circle NED-2374 on enclosed inquiry slip

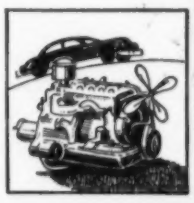
Silicone

RUBBER PARTS

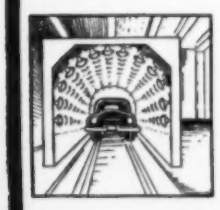
FOR EXTREME HIGH AND LOW TEMPERATURE APPLICATIONS



Silicone rubber parts are playing an important role in aviation today because they will withstand temperatures ranging from −160° to more than 500° F. In many cases, silicone rubber is bonded to metals to form a perfect seal.



Silicone rubber is recommended for use in automotive applications because it will not deteriorate from the chemical action of hot lubricating oils. In fact, sealed silicone rubber gaskets are improved rather than destroyed by hot oils.



Silicone rubber frequently is used to replace metal constructions forced upon design engineers by the limited thermal stability of organic rubbers. It also remains unaffected by long exposure to extreme heat and has excellent dielectric properties.

Silicone rubber tubing can be used to handle Freon, sulphur dioxide, and liquid ammonia in refrigeration systems. It retains its rubber-like qualities and will not become brittle at −160° F. Silicone rubber also remains unaffected by prolonged weathering.

Silicone rubber parts are resistant to ozone, tricresyl phosphate, and the chlorinated hydrocarbons used in liquid cooled transformers. They also are recommended for use in X-ray, radio, radar, television, and other types of electronic equipment.

This versatile synthetic has been developed to meet the critical demands of extreme temperature applications in which resiliency is of primary importance. It can be fabricated into gaskets, diaphragms, grommets, washers, sleeves, channels, seals, packings, tubing, and numerous other molded, extruded, punched, and lathe-cut products.

WRITE FOR CATALOG TODAY.

STALWART RUBBER CO.

2151 NORTHFIELD ROAD

BEDFORD, OHIO

For more details circle NED-2375 on enclosed inquiry slip

TRAILER CASTER
available with 10 or 12-in. wheels

Having 9½ x 11¼-in. ⅝-in. thick steel top plate with 7-in. diameter ball race, Indestructible trailer caster can be obtained with Texite plastic, Moldon rubber or semisteel wheels. Yoke or horn is of malleable iron and is equipped with dirt and dust seal. Features include use of ⅝-in. chrome-steel balls, 1-in. king bolt with castellated nut and cotter key, Timken thrust bearing, ¾-in. axle, and hardened and ground spanner bushing. Made by **Albion Industries, Inc.,** Dept. NED, Plastic Rd., Albion, Mich.

For more details circle NED-2376 on enclosed inquiry slip

PUSH-PULL RULE
6-ft removable blade is flexible

D-shaped case of Defiance No. 1262 push-pull rule adapts it for making inside as well as outside measurements. Blade which is ½-in. wide by 6 ft long is graduated in 16ths for its entire length and in 32nds on upper edge for first foot. Blade and case are nickel plated, and graduations are printed in black for ease of reading. Made by Stanley Tools Div., **Stanley Works,** 104 Elm St., New Britain, Conn.

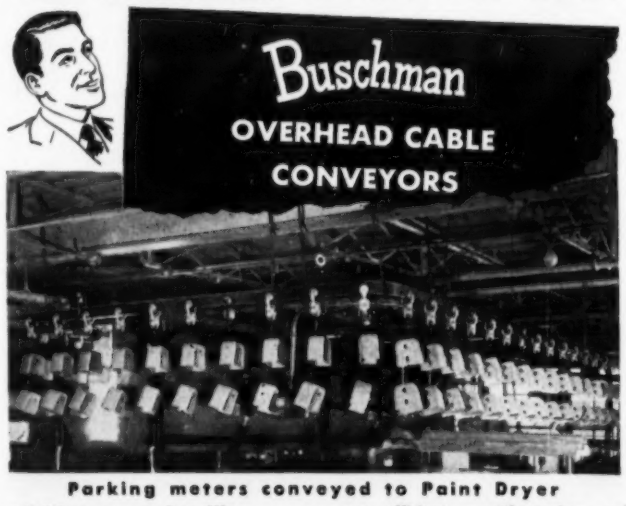
For more details circle NED-2377 on enclosed inquiry slip

TOWING TRACTOR
facilitates order-selection work

Combination clutch-and-throttle control bar extending above cowl and across width of Clarkette-5 towing tractor makes possible control while operator is walking. Tractor will tow 10 tons on trailers over level course at speeds to 6½ mph. In normal driving position, operator stands on backrest-equipped platform several inches above floor. Large steering wheel is centered over cowling so that it can be handled from any operating position. Single castered steer wheel insures perfect tracking once it is positioned and gives machine small turning radius and good maneuverability in narrow aisles. Weight of train acts as brake, but if positive braking is necessary it is afforded by brake bar at rear of driving platform. Parking brake is actuated by electricity and is controlled by toggle switch on instrument panel. Made by **Clark Equipment Co.,** Industrial Truck Div., 1952 Arze St., Battle Creek, Mich.

For more details circle NED-2378 on enclosed inquiry slip

YOUR "Overhead" CAN SAVE YOU MONEY



Parking meters conveyed to Paint Dryer

- Utilizes unused ceiling space
- Releases floor space for production
- Steps up efficiency
- Lowers handling costs.

Non-productive overhead space in your plant can be put to work profitably . . . with the aid of BUSCHMAN Universal Cable Trolley Conveyor. Unattended processes, like paint dipping, automatic spraying, drying or baking or others . . . even live storage . . . can be moved up and out of the way. The space saved can be used to increase production, eliminate congestion.

For light and medium loads, Buschman Cable Trolley Conveyors are efficient, smooth-running, and far less costly than conventional chain conveyors. Stock units can be floor or ceiling mounted without welding and without disrupting your operations. Buschman Engineers will gladly show you—without obligation—how you can have a "custom-built" conveyor installation at "ready-made" prices. For full details, ask for Bulletin 400. *Representatives in Principal Cities.*

Buschman Conveyors

THE E. W. BUSCHMAN CO., INC.
Spring Grove at Winton Place
Cincinnati 32, Ohio

For more details circle NED-2379 on enclosed inquiry slip

Ask Our Specialist On **SEALMASTER BALL BEARING UNITS**

About SEALMASTER Performance

Just say the word and your SealMaster engineer will show you how and why SealMaster Ball-Bearing Units help make machines run longer, smoother and with less maintenance. If you have a special bearing problem put it up to him...you'll find his recommendation mighty helpful. Here are 3 reasons why you're better off with SealMaster.

1. **PERMANENTLY SEALED**—Felt-lined steel flinger rotating in labyrinth keeps out dirt and keeps in proper amount of lubricant.
2. **SELF-ALIGNING**—Bearing unit, with seals independent of housing, can align itself in any direction without seal distortion.
3. **PRE-LUBRICATED**—Proper amount of grease is put in bearing chamber before it leaves the factory.

Write for catalog 845

- Pillow Blocks
- Flange Units
- Take-up Units
- Cartridge Units
- Hanger Units
- Flange-Cartridge Units

Bearing Division

STEPHEN S-A ADAMSON Mfg. Co.

12 Ridgeway Ave., Aurora, Illinois — Los Angeles, Calif. - Bellville, Ont.

Factory Representatives and Dealers in All Principal Cities

For more details circle NED-2380 on enclosed inquiry slip

BEARINGS FOR ECONOMIZERS, BLOWERS AND INDUCED DRAFT FANS AVAILABLE IN OIL FILM, WATER COOLED TYPES.

sandy hill-cleveland type oil-film bearings

free of metallic friction

SHAFT FLOATS ON WEDGE-SHAPED OIL FILM

This bearing carries heavier loads, operates at higher speed, gives uninterrupted flow of power. Outdoes many ordinary bearings because it is friction-free and void of metallic contact. Bearing and shaft never touch! A flowing wedge-shaped film of oil forms a cushion on which the shaft floats free. Flow is always ample. Maintenance is minimized. Large capacity oil reservoir built in the bearing bottom seldom requires refilling.

Sandy Hill

IRON & BRASS WORKS

PAPER MACHINERY SPECIALISTS • HUDSON FALLS, N. Y.

BUILDERS OF SANDY HILL, BERTRAMS AND KAMYR EQUIPMENT

For more details circle NED-2381 on enclosed inquiry slip

AMES

FEATHER-LIGHT POCKET-SIZE THICKNESS MEASURES

For instant, accurate checking, *anywhere*, of *anything* from filaments to tile, Ames feather-light pocket-size dial micrometers are perfect. With exclusive features — automatic, uniform contact pressure, fixed parallel contacts, direct reading count hands — everyone gets the same rapid, precise reading. Models with dial graduations in .0005", .001", .01 mm or Leather ounces. Dimensions, 1⅝" dia. dial; ¼" thick; wt. 1½ oz. Each gauge packed in handsome leather case.

Representatives in principal cities B. C. AMES CO. *34 Ames Street Waltham 54, Mass.*

Mfgr. of Micrometer Dial Gauges • Micrometer Dial Indicators

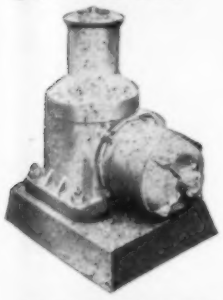
AMES COMPACT BENCH-MODEL DIAL COMPARATOR No. 2

Stable, compact design of the lightweight Ames No. 2 Dial Comparator makes it ideal for impersonal bench inspection. Ideal for checking sheet materials to ASTM specifications when equipped with dead weights and proper contact points. Dial graduations available — .001", .0005", .0001". 2" dia. table easily adjustable to bring pointer to "0". Fingertip lever raises contact for rapid insertion of pieces. Send for descriptive folders on these gauges.

For more details circle NED-2382 on enclosed inquiry slip

S-A Car Pullers

Save Time, Cut Costs



If you have your own switch track, you can use an S-A Car Puller. No need to use a gang of men or wait for a switch engine. *One man can shift or spot up to six loaded cars under normal conditions.* Powerful capstan will also pull or lift other heavy loads at 45 feet per minute.

Write for bulletin 1339

STEPHEN S-A ADAMSON MFG. CO.

Tellevel Bin Level Controls • Car Loaders
SACO Speed Reducers Car Pullers • Winches
SealMaster Ball Bearings

12 Ridgeway Ave., Aurora, Illinois

For more details circle **NED-2385** on enclosed inquiry slip

the MIKRO hand of ECONOMY

$60. per day more material recovered per machine

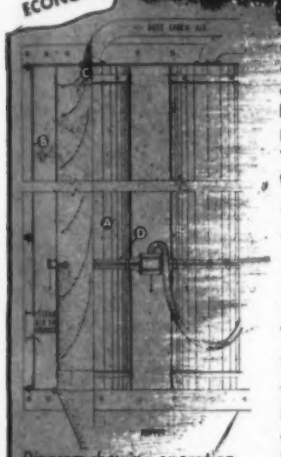


Diagram showing operation of the MIKRO-COLLECTOR

One large manufacturer processing a valuable material recently found that each MIKRO-COLLECTOR* installed in his plant saved him an additional $60 per day in salvaged material.

These savings are directly attributed to these advantages:

★ High percentage of recovery—99.9% plus.
★ Greatly reduced filter cloth area means low maintenance costs, quick and easy material changeovers.
★ Constant uniform flow of dust-laden air.
★ Filter rate 15-25 cfm. per sq. ft. of fabric.
★ Cleaning ring eliminates mechanical shaking.

The revolutionary principles employed in MIKRO-COLLECTOR design insure optimum recovery and sensational filter rates. Our research laboratory and test facilities are available for your dust collection problem without charge or obligation.

SEND FOR—your copy of new MIKRO-COLLECTOR bulletin.

*Patents applied for by H. J. Hersey, Jr., and Pulverizing Machinery Company

PULVERIZING MACHINERY COMPANY
28 Chatham Road, Summit, N. J.

PRESERVE OUR HERITAGE: FAITH, FREEDOM and INCENTIVE

MIKRO-COLLECTOR
Reg. U.S. Pat. Off.
By the makers of MIKRO-PULVERIZERS and MIKRO-ATOMIZERS

For more details circle **NED-2386** on enclosed inquiry slip

Atlas 7" SHAPER

On any shaping job within a 7" stroke, the low-cost Atlas shaper is a time-saver and money-maker. It's so easy to set-up, so inexpensive to operate, and so dependably accurate that oversize equipment can't match it for efficiency and economy!

If your production includes small parts, you'll find hundreds of cost-cutting uses for one or more Atlas 7" Shapers in your plant—production lines, tool room, and maintenance. It has a wide work range—45 to 186 strokes per minute, and cutting speeds of 3½ to 116 fpm. Timken Tapered Roller Bearings, crank type ram drive, extra-heavy construction, V-belt drive. Send for catalog.

ATLAS PRESS CO.
423 N. Pitcher St., Kalamazoo, Mich.

MATCHED PRECISION TOOLS FOR WOODWORKING AND METALWORKING

For more details circle **NED-2387** on enclosed inquiry slip

PRODUCTION RECORDER makes mark when it is unlocked

Recording of busy and of idle time of various types of machinery as well as motor trucks is performed by Servis recorder which has been redesigned. It incorporates marking device which marks on chart exactly when recorder was unlocked. Mark appears as round dot on face of chart and is also embossed on back. New model also has been changed in shape and appearance and has black crinkle finish. Made by **Service Recorder Co.**, 1422 Euclid Ave., Cleveland 15, O.

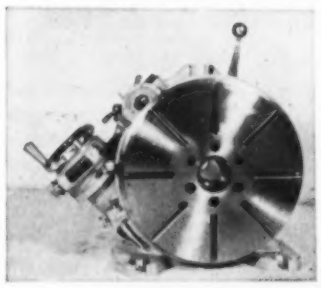
For more details circle **NED-2388** on enclosed inquiry slip

MANUAL DRUM OPENER cuts head of any size steel drum

This hand operated steel drum head cutter will work equally well on empty or filled drums from 10 to 55-gal sizes and of 20 to 16-gage stock. It is placed on top of drum, and turning of crank causes it to complete circle of drum. Head will drop into drum while cutter remains resting on open drum. Cut has no ragged edges, and metal is flanged slightly inward. Unit weighs 36 lb and has blade that will cut 1000 heads before resharpening. It can be used also for sealing leaking chimes when cutter wheel is replaced with roller wheel. Made by **Michael A. Schinker Mfg. Co.**, 6516 S. Western Ave., Chicago 36, Ill.

For more details circle **NED-2389** on enclosed inquiry slip

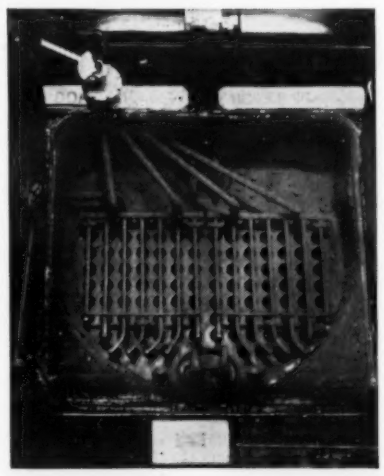
ROTARY INDEXING TABLE incorporates optical control system



Having accurate optical control and rigid construction, OPL rotary indexing table can be used both as working tool and as inspection device. Capable of operating in either vertical or horizontal position, it is suitable for jig boring, die sinking, rotary milling, graduating, horizontal and vertical milling, layout, grinding and inspection work. All settings are made through system of lenses which work in conjunction with master reference drum carrying 360 finely engraved lines equally spaced around its periphery. Lenses pick up and reproduce these reference lines so that they are readily visible through viewing glass. Table can be set directly to degrees, minutes and seconds without calculation. Features include nondeforming turntable slots, two-speed manual control, Timken 00 extra precision taper roller bearings, and spindle locking clamp which can not impart movement to turntable. Made by **F. T. Griswold Mfg. Co.**, 0305 W. Lancaster Ave., Wayne, Pa.

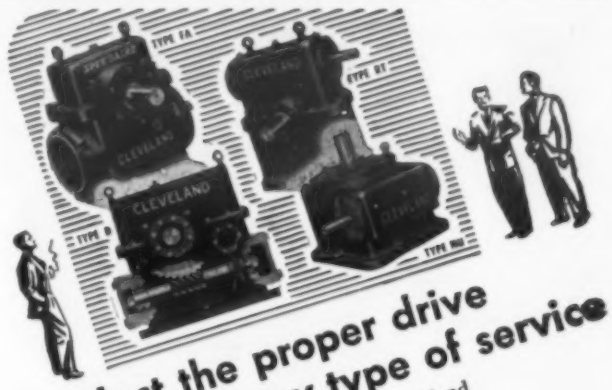
For more details circle **NED-2390** on enclosed inquiry slip

MECHANICAL SOOT BLOWER cleans tubes of fire-tube boilers



Recommended for removing soot and fly-ash from boiler tubes, this mechanical soot blower improves operating efficiency by eliminating excessive soot coatings that prevent effective heat transmission. Unit consists of specially designed quick-acting four-way valve that controls entrance of steam into four divisions of rigidly constructed pipe frame. Individual nozzles set before each tube direct expanding steam through channels to provide thorough cleaning action in 1½ minutes. Made by **Hahn-Pitz Corp.**, 286-6S Scholes St., Brooklyn 6, N. Y.

For more details circle **NED-2391** on enclosed inquiry slip



To select the proper drive for any type of service

GET your copies of the latest Cleveland catalogs for full information on all types and sizes of worm gear speed reducers—including rating tables, dimensional diagrams and data for both standard and fan-cooled units. Ask for Catalog 200 for standard drives and Catalog 300 for Speed-aire (fan-cooled). The Cleveland Worm & Gear Co., 3283 E. 80th St., Cleveland 4, O.

For personalized service: Write or phone John E. Millikan Cleveland exch. VUlcan 3-4560

CLEVELAND Worm Gear Speed Reducers

For more details circle **NED-2392** on enclosed inquiry slip

LETS HAVE THE TOUGHEST CHAIN JOB IN YOUR PLANT

● Put HERC-ALLOY Steel Chain on the toughest job you can find. Let HERC-ALLOY service-experience records give you first hand, the undeniable answers in black and white.

Production executives and safety directors who have used HERC-ALLOY for slings or other applications agree they have yet to find an alloy steel chain superior to HERC-ALLOY.

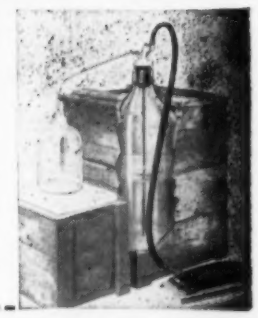
COLUMBUS McKINNON CHAIN CORPORATION

GENERAL OFFICES AND FACTORIES: TONAWANDA, N. Y.
SALES OFFICES: NEW YORK • CHICAGO • CLEVELAND • SAN FRANCISCO

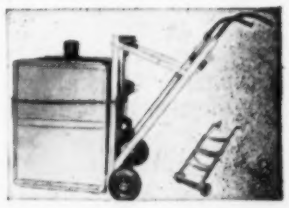
For more details circle **NED-2393** on enclosed inquiry slip

FOR SAFE HANDLING *of corrosive liquids*

SAFE, FAST ACID PUMP—For carboys, drums and barrels. A smooth flow starts quickly . . . no dangerous spurts or splashes. Lifting and tilting eliminated. No dangerous pressure build-up, flow can be stopped instantly.



ALL-PURPOSE HAND TRUCK—Carboys, drums, barrels transported vertically when used in "open" position. In closed position loads are handled in conventional manner. Scientifically balanced for maximum leverage and ease of handling.



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SEND FOR COMPLETE DATA AND PRICES
GENERAL SCIENTIFIC EQUIPMENT CO.
2701 W. Huntingdon St., Philadelphia 32, Pa.
COMPLETE 1950 SAFETY CATALOG SENT ON REQUEST

For more details circle **NED-2394** on enclosed inquiry slip

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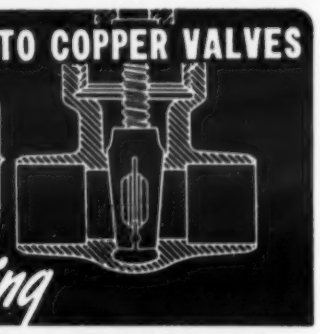
Famous in the steel industry for their durability and "good impressions", these Pannier "Master Markers" are *still* your best bet for efficient and clear-cut marking of steel and steel products. Write for full information today.

THE PANNIER CORPORATION
301 Pannier Building
Pittsburgh 12, Pa.

▲ For more details circle NED-2395 on enclosed inquiry slip ▲

New...COPPER TO COPPER VALVES WITH THINNER PIPE ENDS for Easy Soldering



O-B has produced a fast-heating pipe end that permits rapid distribution of heat through the valve wall and assures an even flow of solder around the tubing. Carefully tapered, the pipe end walls take advantage of the inserted tubing for reinforcement, resulting in a sturdy, leak-tight, copper-to-copper connection.

OHIO BRASS COMPANY - - - Mansfield Ohio

AVAILABLE IN THE FOLLOWING SIZES

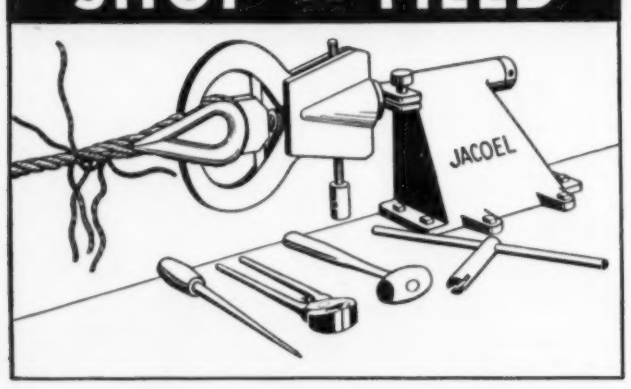
No. 28	Gate	125 lbs. Non-Rising Stem	¼" to 2"
No. 29	Gate	125 lbs. Rising Stem	¼" to 2"
No. 24	Gate	100 lbs. Non-Rising Stem	¼" to 2"
No. 6	Globe	100 lbs. Rising Stem	¼" to 1"
No. 7	Globe with waste	100 lbs. Rising Stem	¼" to 1"

4040-V

Ohio Brass VALVES

▲ For more details circle NED-2396 on enclosed inquiry slip ▲

SHOP OR FIELD



"One-Man" Wire Rope Splicer

Light — Compact — Easy to Use. Makes Splicing as simple as clipping or clamping. Saves Man-Hours* Saves Money

*Up to 50%

WRITE TODAY!

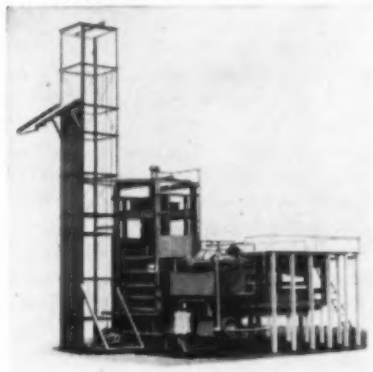
Special Tools Splicing Needles Wire Tighteners

20 lb Effort = 500 lb Pull

100 BARR WASHINGTON 6, D. C. QUAY Industries EXCLUSIVE MFRS. JACOEL TOOLS
DISTRIBUTOR INQUIRIES INVITED

▲ For more details circle NED-2397 on enclosed inquiry slip ▲

SCRAP METAL BALER
employs bottom drop-out for bales



Designed for continuous operation, model 4-A-BD baling press delivers 300-lb bales at rate of 38 to 43 per hour. Charging box measures 84 x 76 x 57-in., and scrap metal bales measure 14 x 16 x 20 in. While compression chamber is baling, charging chamber is receiving new load. Construction is of riveted and electric-welded plates and structural shapes. Unit is powered by 75-hp electric motor and employs 2000-psi Vickers vane type rotary pump. Floor space of 21 x 23 ft is required for installation. Made by **Harris Foundry & Machine Co.,** 108 Ninth St. S., Cordele, Ga.

▲ For more details circle NED-2398 on enclosed inquiry slip ▲

HIGH-POWER FLASHLIGHT
8-cell unit delivers 2500-ft beam

Powered by eight standard flashlight batteries which afford 12-v operation, Yellow-Flash 8 flashlight is compact 8-in. unit which fits easily into tool box. Convertible circuit is provided which permits using standard 6-v lantern battery with substitution of lower power bulb. Flashlight is priced at $3.95. For special applications, headlight and hand lantern models are offered at slightly higher prices. Made by **Justrite Mfg. Co.,** 2056 N. Southport Ave., Chicago 14, Ill.

▲ For more details circle NED-2399 on enclosed inquiry slip ▲

BROACHING MACHINE
applicable for toolroom operations

Flat top of 4-ton broaching machine designed for general short-run and miscellaneous broaching permits handling of large as well as small parts without special fixtures to support work. Heavy parts can be placed easily on 48-in. high table since there are no obstructions. Typical of applications is broaching elongated holes in broach bars. Other toolroom uses include slotting, keyway broaching, broaching irregularly shaped holes and broaching of fixtures. Made by **Colonial Broach Co.,** P. O. Box 37, Harper Station, Detroit 13, Mich.

▲ For more details circle NED-2400 on enclosed inquiry slip ▲

AIR LINE FILTER
has maximum capacity of 40 cfm

This No. 65D-1 air line filter employs porous sintered bronze filter element to filter out all particles of dust, dirt, grit or scale down to 0.001-in. size. Filter element is contained in two-piece aluminum housing which has series of baffles in bottom of unit to trap condensation and moisture in sump from which accumulated waste can be removed through drain cock. Cleaning of filter element is accomplished by lifting unit cover, removing element and cleaning with brush in benzine or similar solvent. Jet of air blown through element in direction opposite to normal flow dislodges particles trapped inwardly. Unit measures 3¾ x 2⅜ x 5⅛ in. and is threaded for ½-in. pipe. Made by **Keller Tool Co.,** Dept. N, Grand Haven, Mich.

▲ For more details circle NED-2401 on enclosed inquiry slip ▲

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GLOBE WALL CLIMBER*
*TRADEMARK

SHORT CUT TO UPPER FLOORS

Moves goods directly from the street to upper floors. A practical lift application for hotels, convention halls and warehouses. Saves manpower. Cuts handling costs. Pushbutton controls. Hydraulic cylinder or chain hoist lifting power. Send for specifications and complete details now.

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Loading Lifts · Elevating Ramps · Industrial Truck Lifts · Production Lifts · Elevators · Sidewalk Lifts

▲ For more details circle NED-2402 on enclosed inquiry slip ▲

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GAST rotary AIR PUMPS

NOW—THE SAME DEPENDABLE GAST ROTARY PUMPS + IMPROVED HOUSING DESIGN = FIVE EXTRA ADVANTAGES...

1 — New fin housings provide greater cooling surface...
2 — Streamlined appearance, simpler, better looking...
3 — Same mounting dimensions ... interchangeable with older Gast models...
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As original equipment, GAST rotary-design Air Pumps offer greater-than-ever values . . . in *improved salability for your product.* Air compressors in 5 sizes provide positive pressure range up to 30 P.S.I. — displacement to 21 C.F.M. Dry Vacuum Pumps in 5 sizes produce vacuum to 28 inches — displacement to 21 C.F.M.

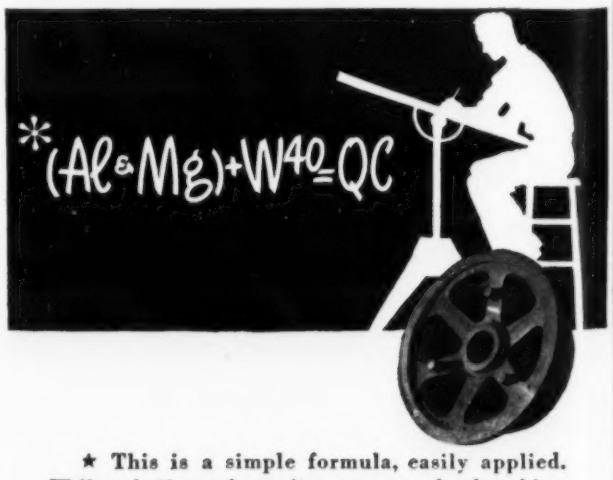
WRITE FOR NEW CONDENSED CATALOG—BULLETIN 549-A

see our CATALOG in SWEET'S FILE for PRODUCT DESIGNERS

"AIR may be your Answer!"

GAST ROTARY AIR MOTORS (TO ONE H.P.) · COMPRESSORS (TO 30 LBS.) · VACUUM PUMPS (TO 28 INCHES)
GAST MANUFACTURING CORP., 115 Hinkley St., Benton Harbor, Mich.

▲ For more details circle NED-2403 on enclosed inquiry slip ▲



★ This is a simple formula, easily applied. Wellman's *40 years' experience* are yours for the asking. *Quality Castings* in magnesium, aluminum or bronze produced to your exact specifications. Our *three plants* are completely equipped for production from blueprint to finished casting. *Well-Cast lightweight* castings are being produced every day for the aircraft, automotive, rubber goods, portable tool, textile, and other industries. What are your requirements? Catalog No. 50 on request.

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"WELL-MADE" WOOD AND METAL PATTERNS

THE WELLMAN BRONZE & ALUMINUM CO.

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▲ For more details circle NED-2404 on enclosed inquiry slip ▲

Springs are Springs

maybe so for most people ... but NOT for ACCURATE

HOW often have you heard a spring user or even a manufacturer say "Springs are springs, what difference who makes them if the price is right?" Here at Accurate, we think it makes a big difference. *Exact* conformance to specifications can be mighty important if it means easier, faster assembly and better performance for your product. "Know-how" and facilities for making springs the least costly way can mean many dollars for you. Write for details.

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Springs · Accurate Springs · Wire Forms • Stampings

For more details circle **NED-2405** on enclosed inquiry slip

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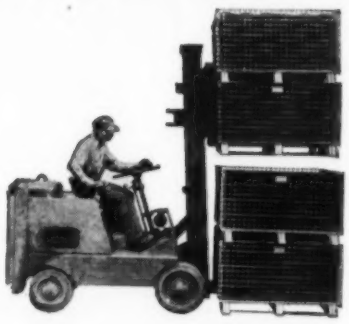


Day after day more products are carried all the way from original manufacture to assembly line ... in sturdy, scientifically-built *Cargotainers* thus completely saving the cost of rehandling. Whether you use Cargotainers for products you make for others or for parts you buy for assembly, you benefit equally, because Cargotainers ship, store, move to assembly and collapse for return ... all with the same facility. Write for full details today to Pittsburgh Steel Products Company, Dept. NED, Grant Building, Pittsburgh 30, Penna

by

Pittsburgh Steel Products Company
Subsidiary of Pittsburgh Steel Company
Pittsburgh 30, Pa.

For more details circle **NED-2406** on enclosed inquiry slip

ALUMINUM WELDING ELECTRODE has tensile strength of 35,000 psi

Developed for welding aluminum and aluminum alloys, Eutectrode 2101 welding electrode deposits metal rapidly and smoothly with good color match and corrosion resistance. It can be obtained in 1/8 and 3/16-in. sizes and is recommended for reclamation of new castings and repair of old ones. Weld puddle is visible at all times because fumes and smoke have been eliminated by improving electrode coating. Made by **Eutectic Welding Alloys Corp.**, Dept. A-2, 40 Worth St., New York 13, N. Y.

For more details circle **NED-2407** on enclosed inquiry slip

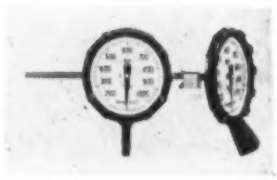
STRAIN INDICATOR portable unit is battery powered

Usable with SR-4 bonded resistance wire strain gages, direct-reading type L portable battery-powered strain indicator is refinement of previous type K instrument. The ten 'thousands' steps are increased from 1000 to 2000 microinches per in. per step, giving total of 20,000 microinches per in. This feature minimizes use of range extender switch without affecting accuracy. Range extender is increased to 20,000 microinches with accuracy within 50 microinches. Change extends balancing range of instrument to plus or minus 30,000 microinches and permits measurements in plastic range of metals.

Unit can be used with completely external wheatstone bridge circuit without modifying internal circuit. Oscilloscope connector jack is provided for applications in rephasing problems encountered when using extremely long leads between strain gages and instrument. Instrument is designed and calibrated for 120-ohm gages with gage factors of 1.77 to 2.20. However, gages of other resistances and gage factors can be used. Converter is available for operating indicator on 110-v 60-cycle single-phase power when required for continual operation. Made by **Baldwin Locomotive Works**, Dept. T.E, Philadelphia 42, Pa.

For more details circle **NED-2408** on enclosed inquiry slip

DIAL THERMOMETER indicates from 200 to 1000° F



Comprising 3-in. diameter body and 5½-in. free length stainless steel stem, Tempoint dial thermometer requires only 2-in. immersion to obtain accurate reading. Bezel of body is high temperature Bakelite with glass window sealed with silicone gasket to keep moisture and dust from scale. Excellent readability is afforded by bright red V-shaped pointer and large nonglare scale with large numerals and clear graduations. Thermometer is designed for fast accurate thermal response. Expansion of bi-metal coil rotates attached small shaft and indicating pointer as unit to provide accuracy within 1 per cent of range. Made by **Bacharach Industrial Instrument Co.**, Murtland Ave., Pittsburgh 8, Pa.

For more details circle **NED-2409** on enclosed inquiry slip

BATTERY CHARGER automatically controls charge

Battery safety and charging efficiency is assured by Duplex control incorporated in portable selenium rectifier type battery charger. This single control governs two clocks which are synchronized for accuracy. One clock limits charging period to 9 hours, and other operates when voltage is 'up' and it is time for shifting from initial high charging rate to finishing rate. Finishing rate continues for 3 hours after voltage reaches high point. If alternating current is cut off during cycle for any reason, charging resumes automatically at point of interruption as soon as power is restored. Having 55-amp capacity, unit will charge 12-v 11-plate battery in maximum of 8 hours or 6-cell 13-plate battery in 8 to 9 hours. Unit operates on 115-v, draws maximum of 1160 w and is approved by Underwriters' Laboratories. Made by **Automatic Transportation Co.**, 149 W. 87th St., Chicago 20, Ill.

For more details circle **NED-2410** on enclosed inquiry slip

Remove SCALE, PAINT, RUST Quickly ... Easily

USE AURAND CLEANING TOOLS

For any hard metal or stone surface—iron—steel—brick—concrete—etc.

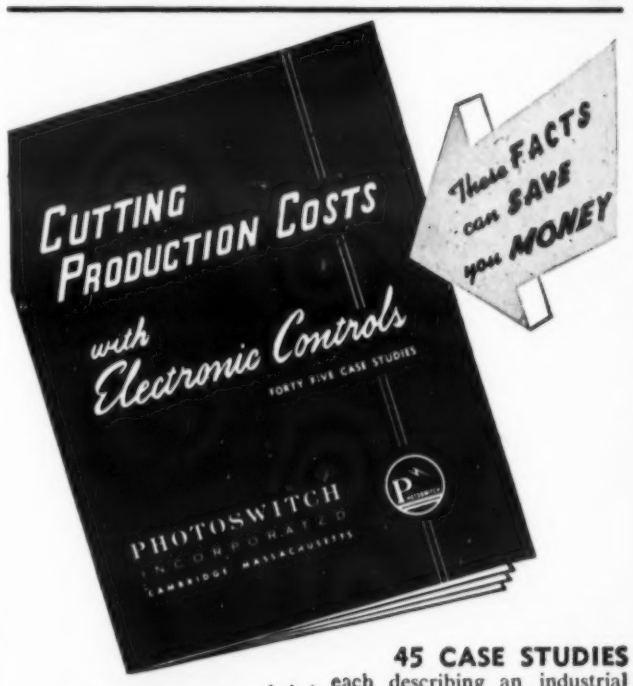
Electric and Pneumatic 2 sizes of each

It's easy to remove paint, scale, rust and other accumulations with AURAND Cleaning Tools. Powered rotary chipping does a thorough cleaning job in less time. No special skill required. Even depth surface is assured by an adjustable shoe control. Cutter heads are renewable.

For further information, address Dept. 14

AURAND MFG. & EQUIP. CO.
2643 Colerain Avenue • CINCINNATI, OHIO

For more details circle **NED-2411** on enclosed inquiry slip



45 CASE STUDIES . . . each describing an industrial control problem which has been solved through the use of electronics. Not a catalog . . . it shows HOW photoelectric and electronic controls count, guard, sort, weigh, measure, maintain liquid levels, program operating cycles and do countless other tasks with unfailing accuracy and amazing speed.

Write for your copy today.

PHOTOSWITCH INCORPORATED
77 Broadway, Cambridge 42, Massachusetts

For more details circle **NED-2412** on enclosed inquiry slip

NEW PLASTIC FLOOR PATCH SETS INSTANTLY

There's no need to tie up plant traffic while broken concrete floors are being repaired. Durable INSTANT-USE will restore your floors to solid smoothness in a hurry. This new plastic resurfacer is ready for use almost as soon as it's put down. Bonds tight to old concrete, makes long-lasting heavy duty patch or complete overlay. Withstands extreme loads.

TAMP! TRUCK OVER!

Simply shovel INSTANT-USE into the hole or rut—tamp—and your floor is ready for traffic without the usual wait for setting. Keep a drum on hand for emergencies. Immediate shipment.

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INSTANT-USE

FLEXROCK COMPANY
3603 Filbert St., Philadelphia 4, Pa.
Offices in Principal cities

Please send me complete INSTANT-USE information, details of TRIAL ORDER PLAN and HAND BOOK OF BUILDING MAINTENANCE—no obligation.

Name .....
Company .....
Address .....

For more details circle **NED-2413** on enclosed inquiry slip

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ECO GEARLESS PUMPS

AMERICA'S MOST VERSATILE MULTI-PURPOSE PUMP

for liquids and viscous fluids

- For pumping Chemicals, Food Products, Coolants, Beverages, Brine, Water, Oils, Fuels, etc.
- Quiet, smooth running. Bearings require no lubrication.
- Naval Bronze Forgings or Stainless Steel pump bodies last indefinitely, will not corrode.
- Capacity from 5 gph to 15 gpm. For use against pressures up to 150 lbs. per sq. in. Pumps in either direction.
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- Ideally adapted for many types of original equipment.
- Dependable, trouble-free performance offers lowest cost per gallon of liquids moved.

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Mfrs. of Gearless Pumps for Industrial, Farm, Home & Marine Use.

ECO ENGINEERING CO.

12 New York Avenue • Newark 1, N. J.

▲ For more details circle NED-2414 on enclosed inquiry slip ▲

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LOADING and CONVEYING EQUIPMENT for every purpose

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BUCKET-TYPE CONVEYORS

CLEATED-BELT CONVEYALLS

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Please rush my free copy of the Harper Computer of Corrosion Resistance.
Name.....
Company.....
Address.....
City..... State.....

▲ For more details circle NED-2416 on enclosed inquiry slip ▲

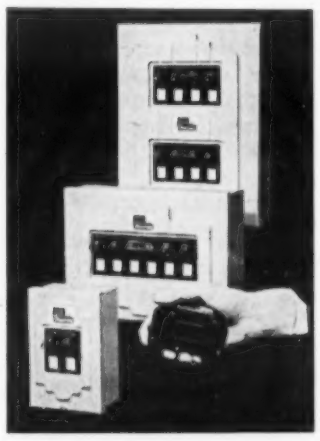
PLASTIC MOLDING PRESS
for thermosetting materials has ram stroke of 500 in. per minute

Fast die-closing action of this oil-hydraulic Multipress allows use for compression molding of fast-thermosetting plastics such as Plaskon Alkyd. It is designed for automatic tumbler feeding of granular powder to either single or multiple mold cavities. It features automatic dwell or curing time, electric heating of mold halves, and automatic ejection of finished parts. Preset pressure control assures precise duplication of pressure with each operating cycle. In addition to continuous cycling for production molding, it has single-lever manual control to facilitate small production, laboratory tryouts, die setups and mold changes.

Basic 4-ton bench-size machine has maximum 6-in. stroke, 12-in. daylight opening and 6-in. throat. Tooling area is 10½ x 16 in. Pressure period is regulative from 1/10 to 4 minutes. Stroke length, ram speed and tonnage are easily adjustable. Ram force can be regulated for fixed pressure or fixed distance. Made by **Denison Engineering Co.**, 1152 Dublin Rd., Columbus 16, O.

▲ For more details circle NED-2417 on enclosed inquiry slip ▲

LOAD CENTERS
small size units available for two, four, six or eight circuits

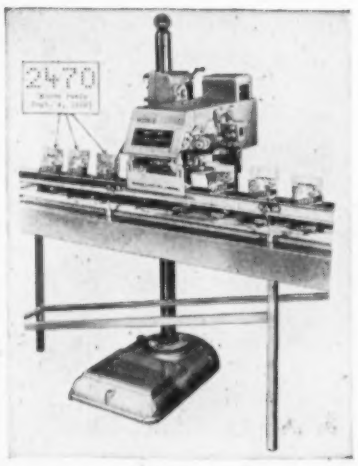


Utilizing recently designed magnetic circuit breakers having considerably smaller dimensions than previous types, these load centers afford savings in space while providing ample wiring room. Depth of 3 in. permits flush installation in thin walls, and ⅜-in. plaster line adjustment is provided. Wiring in enclosure is simplified by fact that breakers of different ratings can be arranged in whichever positions are most convenient for connecting particular circuits required. Breakers are available in ratings of 10, 15, 20, 25, 30, 35 and 50 amp.

Furnished in either surface or flush mounting type, covers are finished in neutral gray baked-on melamine enamel. Since breakers are free from thermal effects, they can be mounted in warm locations, in poorly ventilated panels or even in direct sunlight without danger of false tripping below rated load. Hermetically sealed time delay unit enables breaker to carry harmless temporary overloads yet permits it to trip instantly on dangerous overloads. Units are listed by Underwriters' Laboratories. Made by **Murray Mfg. Corp.**, 1250 Atlantic Ave., Brooklyn 16, N. Y.

▲ For more details circle NED-2418 on enclosed inquiry slip ▲

CODE-DATING PERFORATOR
can code up to 200 items per minute



High speed coding of heat-sealed wax paper, Cellophane, Pliofilm and other types of bags is performed automatically by self-contained model 700 photoelectric perforator. Illustration shows machine automatically perforating code date through heat-sealed portion of potato chip bags traveling at rate of 95 per minute. Perforator stands on pedestal alongside of heat sealer and perforates bags as they intercept electric eye beam. Not only are date, batch number, plant identification or other information perforated as desired, but single round hole can at same time be placed in center of bags to be used for hanging. Also, each item passing through perforator is automatically registered on electric counter as production check. Being mounted on pedestal stand, complete unit can be moved as desired. Made by **American Perforator Co.**, 627 W. Jackson Blvd., Chicago 6, Ill.

▲ For more details circle NED-2419 on enclosed inquiry slip ▲

For HIGHEST ELECTRICAL & MECHANICAL Efficiency!

New JONES 2400 SERIES PLUGS & SOCKETS

P-2406-CCT Plug — with cable clamp in top.

Improved Socket Contacts. Four individual flexing surfaces. Positive contact over practically their entire length.

Both Plug and Socket Contacts mounted in recessed pockets greatly increasing leakage distance, INCREASING VOLTAGE RATING. Plug and Socket Contacts cadmium plated. Add to appearance of your equipment. Interchangeable with Jones 400 Series.

Ask for Catalog 17. Complete line Jones Plugs, Sockets, Terminal Strips.

S-2406-SB Socket with shallow bracket for flush mounting.

Jones

HOWARD B. JONES DIVISION
CINCH MANUFACTURING CORPORATION
CHICAGO 24, ILLINOIS
SUBSIDIARY OF UNITED-CARR FASTENER CORP.

▲ For more details circle NED-2420 on enclosed inquiry slip ▲

Now you can fasten V-belts by using

ALLIGATOR V-BELT FASTENERS

● Alligator V-belt Fasteners and the open-end V-belting now being made by belting manufacturers, will enable you to make up multiple V-belt drives from roll belting. These fasteners have been on the market 9 years and are now being used on a wide variety of drives.

Available for B, C, D sizes of belt for industrial use and 1-in. and 2-in. sizes for railroad use. These fasteners, however, should not be used for repairing endless cord V-belts.

Bulletin V-205 will give you complete details as to where and how these fasteners are used, sizes, list prices, tools and application instructions. A copy will be mailed at your request.

Order from your supply house

FLEXIBLE STEEL LACING COMPANY
4664 Lexington Street, Chicago 44, Illinois

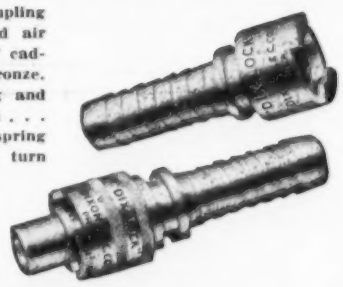
Also sole manufacturers of Alligator Steel Belt Lacing for flat transmission belts and Flexco HD Belt Fasteners and Rip Plates for fastening and repairing conveyor belts.

▲ For more details circle NED-2421 on enclosed inquiry slip ▲

"DIX-LOCK"

Quick-Acting, Streamlined AIR HOSE COUPLING

A modern, efficient coupling for all factory and field air lines up to ¾". Made of cadmium plated steel or bronze. Light weight, yet strong and durable. Snap-lock action . . . quarter turn against spring tension; reverse quarter turn to unlock. Hose ends; male and female I.P.T. ends. Completely interchangeable.



Stocked by Mfrs. and Jobbers of Mechanical Rubber Goods

DIXON VALVE & COUPLING CO.

Hancock St. and Columbia Ave. Philadelphia 22, Pa.

Branches — Chicago • Birmingham • Los Angeles • Houston

▲ For more details circle NED-2422 on enclosed inquiry slip ▲

Join Sheet Steel

WITH THE "HELIARC" Trade-Mark SPOT WELDING TORCH

Needs no forging pressure
Works from one side only
Welds Stainless, Low Alloy, and Carbon Steel Sheet

Torch spot welding, the new inert gas-shielded process, makes possible easy assembly of sheet metal parts from one side without forging pressure. Sheets of stainless steel, low-alloy or carbon steel, 21 to 16 ga. thick, can be joined to each other or to plates of any thickness.

The HELIARC HW-8 spot welding torch has an operating radius of 25 feet. To make a weld, press the "muzzle" against the work, and pull the "trigger". The rest is automatic. This ideal production line tool is as portable and handy as an oxy-acetylene blowpipe. For more information call any LINDE office.

THE LINDE AIR PRODUCTS COMPANY
Unit of Union Carbide and Carbon Corporation
30 East 42nd St. New York 17, N. Y. UCC Offices in Other Principal Cities
In Canada: DOMINION OXYGEN COMPANY, LIMITED, Toronto
The words "Linde" and "Heliarc" are registered trade-marks of The Linde Air Products Company.

▲ For more details circle **NED-2423** on enclosed inquiry slip ▲

▲ For more details circle **NED-2424** on enclosed inquiry slip ▲

Cut Costs with MEAD MIDGET AIR CLAMPS

Horizontal and Vertical!

Both models deliver 80 lbs. pressure on a line pressure of 100 lbs. They'll save countless man-hours in assembly operations involving welding, riveting, bolting, etc. *Advantages over mechanized clamps:* 1. Any number can be operated by single master valves. 2. Easily installed in cramped corners. 3. Equal ram pressure at any stroke point. Send for new Mead AIR POWER Catalog, describing our line of Air Clamps, Air Vises, Air Presses, Work Feeders, Valves, Controls, etc.

MEAD SPECIALTIES COMPANY
4114 No. Knox Ave., Dept. N-40-A, Chicago 41, Ill.

▲ For more details circle **NED-2425** on enclosed inquiry slip ▲

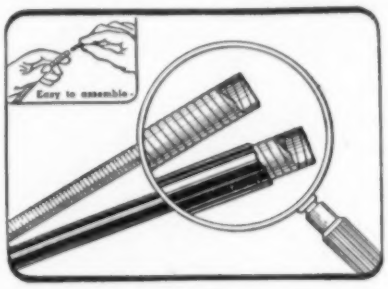
FOOT SWITCHES
in momentary or double-action types

Supplied in standard models or altered to specifications, line of foot switches is adapted for use on all types of power machines and electrical devices. Illustrated model FS-50 is rated 12 amp at 125 v or 6 amp at 250 v ac or dc. Other models and ratings are obtainable. Where switch must be fastened to floor, mounting bracket is furnished. Finish of housing is crackle gray, with dark red pedal. Made by **Pioneer Patents & Products Co.**, Dept. C, 25 N. Franklin St., Chicago 6, Ill.

▲ For more details circle **NED-2426** on enclosed inquiry slip ▲

WIRE SHIELDING
is of vinyl-covered flexible metal

This vinyl-covered type of Monocoil wire shielding has been developed to prevent grounding of casing at more than one point and to provide high voltage insulation. Used with ethylene-covered conductors, material behaves like concentric cable, having low distributed capacity and high performance factors. Favorable results have been reported relevent to its use by audio, radio and television manufacturers.



Also recently added to plain tinned-steel series is special bronze variety that combines high strength of tinned brass with low cost of tinned copper. All types permit increased freedom of action over braided wire in giving complete choice of conductor wire sizes, dielectric material, color coding and harness arrangements to be used with shielding. Made by **Kupfrian Mfg. Co.**, 517 Prospect Ave., Binghamton, N. Y.

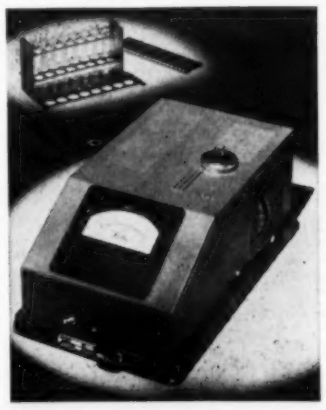
▲ For more details circle **NED-2427** on enclosed inquiry slip ▲

ELECTRIC POWER PLANTS
350 and 750-w units are portable

Designed as source of current in places not reached by central station service, 350 and 750-w portable electric power plants are suitable for floodlighting night operations; operating sound amplifying, radio and television equipment; and powering tools, pumps and electrical appliances. Automatic 750-w 115-v ac model will operate thirty 25-w lights at one time. It starts when any light, appliance or motor is turned on and stops when all loads are turned off. Both units are powered by one-cylinder air cooled gasoline engines. Made by **Kohler Co.**, Dept. 2, Kohler, Wis.

▲ For more details circle **NED-2428** on enclosed inquiry slip ▲

COLORIMETER
speeds routine processing analyses



Careful matching of photoelectric cell and microammeter provides high degree of accuracy for Leitz Rouy-Photrometer improved colorimeter. It gives concentration readings in which inherent functional error is held within 0.1-per cent. Unit is applicable for use in water supply, soil and fertilizer, food, crop control, electroplating, ferrous and nonferrous metallurgy, dye stuffs, diecasting, glass, vegetable and mineral oil, tanning and other industries.

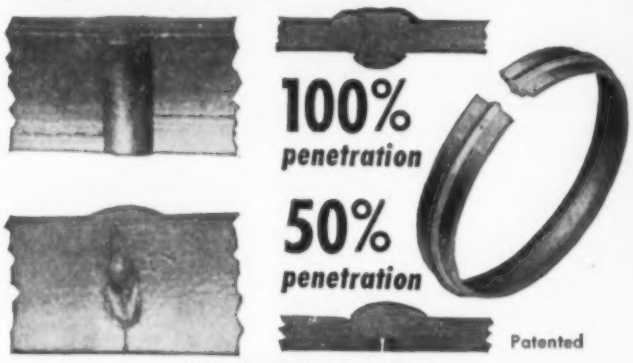
Operation is rapid and simple, with single control for all adjustments. Once calibrations have been set up, no special skill or calculation is required. Unit is single cell, line-operated instrument. On special order, it can be furnished for 6-v dc operation. It is available with four absorption cells, one sealed water absorption cell, plastic insert, dust cover and handbook. Made by **E. Leitz, Inc.**, 302 Hudson St., New York 13, N. Y.

▲ For more details circle **NED-2429** on enclosed inquiry slip ▲

WEDGE Split CHILL RINGS assure 100% PENETRATION

That's why you get stronger Joints welding PIPE, TUBE or PARTS

One of the best ways to prevent costly welding failures is to obtain 100% penetration of the welding material. WEDGE Split Chill Rings REINFORCE the joints and also assures 100% penetration of the entire circumference. You can weld pipe, tube or parts faster, better and cheaper by using WEDGE Chill Rings and at the same time prevent future trouble.



Write for further information.

WEDGE PROTECTORS, INC.
3973 Jennings Road Cleveland 9, Ohio

Use WEDGE Chill Rings-Thread Protectors

▲ For more details circle **NED-2430** on enclosed inquiry slip ▲

Preferred

4 CYCLE BRIGGS & STRATTON GASOLINE ENGINES

air-cooled **POWER**

There are more Briggs & Stratton air-cooled gasoline engines in service — on farm equipment, industrial machines, tools, and appliances — than all other makes of gasoline engines in their field combined.

No other single-cylinder, 4-cycle, air-cooled engines are so universally preferred by manufacturers, dealers and users alike.

No other engines in their class can match Briggs & Stratton in engineering precision — in dependable performance — long life — service.

BRIGGS & STRATTON CORP.
Milwaukee 1, Wis., U.S.A.

▲ For more details circle **NED-2431** on enclosed inquiry slip ▲

When attending the A.S.T.E. show at Philadelphia Convention Hall in April, be sure to find out the many ways interchangeable punches and dies can save you time and money on your particular press applications. engineers will be on hand to help you on your die-making and production problems.

BOOTH 665
TOOL ENGINEERS COST-CUTTING INDUSTRIAL EXPOSITION

If unable to attend the Show, send for catalog giving full information on Allied's "one stop service" for die makers and die users.

ALLIED PRODUCTS CORPORATION
Department 42
12629 Burt Road • Detroit 23, Mich

For more details circle NED-2434 on enclosed inquiry slip

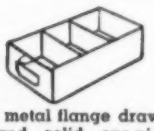
STURDY, CONVENIENT, LOW-COST
JIFFY ALL METAL CABINETS

FOR SMALL PARTS, DRILLS, TOOLS, CARBIDE TIPS AND MOUNTED POINTS

32 DRAWER UNIT • DIVIDES INTO 96 COMPARTMENTS
$8.95
POSTAGE PAID

64 DRAWER UNIT • DIVIDES INTO 192 COMPARTMENTS
$15.95

Rustproof Aluminum Drawers



Complete set of Dividers and Index Cards supplied.

APPROXIMATE SIZES
DRAWER
1¼" Deep
2¾" Wide
6" Long
32 DRAWER UNIT
6" Deep
12¾" Wide
15¼" High
64 DRAWER UNIT
6" Deep
25½" Wide
15¼" High

Spot welded steel cabinet, metal flange drawer guides, enamel finish and solid one-piece aluminum drawers in natural satin finish. The first multiple drawer metal cabinet for convenient storage of small parts, drills, tools, carbide tips, mounted points or assembly bench work at such a low cost. Order now for immediate delivery. Send check or money order or rated companies shipped on receipt of purchase order.

KAYTEE PRODUCTS
DEPT. P BOX 588 • CANTON, OHIO

For more details circle NED-2435 on enclosed inquiry slip

The ANSWER to controlling air electrically!

MODEL NE
Electric
VALVE

10 WATT SOLENOIDS—Low power requirements. No relays, no transformers required. Operates directly off regular 110 or 220 v. circuits. Solenoids continuously rated.

FAST, EFFORTLESS CONTROL—Works by push button, limit switch, or any light contact. Only momentary contact needed. Ideal for remote control ... interlock or sequence operation ... building into equipment.

DISC TYPE—Pilot controlled; piston operated. Metal-to-metal seat; positively air-tight. Quiet, self-lapping, long lasting. No packing or seals to maintain.

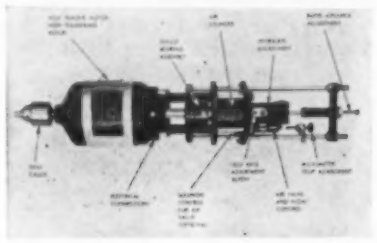
HANNIFIN ENGINEERED—Small, rugged, self-contained. Type 1 for control of advance and return cylinder strokes through separate push buttons. Type 2 for single push button control—equivalent to spring return valve action. Sizes ⅜", ½", and ¾". 25 to 150 p.s.i.

Ask for Bulletin 230

HANNIFIN Corporation
1127 So. Kilbourn Avenue • Chicago 24, Illinois
Nationwide Sales and Service

For more details circle NED-2436 on enclosed inquiry slip

AUTOMATIC DRILLING HEAD
exerts pressure in straight line

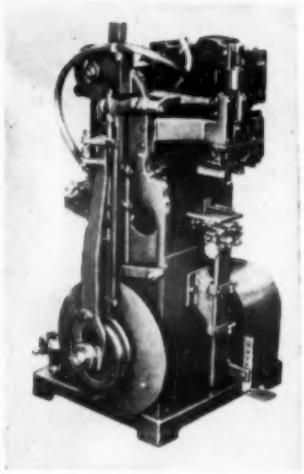


'In-line' construction of No. 1000 improved type automatic self-contained drilling unit gives balanced action and assures that force is loaded evenly throughout. Lost motion and side slip are eliminated, and motor shaft which is integral with rotor is only rotating member.

Hydraulic check for controlling feed rate is mounted on rear of unit with two rigid side bars moving through oilless bushings to carry rapid advance adjusting bolt. All adjustments for feed rate, length of stroke, depth control and rapid advance are made quickly through three adjusting screws while unit is operating. Head can be operated in any position at any angle for single or multiple setup work. Made by **Black Drill Co.**, 1380 E. 222nd St., Cleveland 17, O.

For more details circle NED-2437 on enclosed inquiry slip

LABELING MACHINE
uses thermoplastic-coated labels



Labeling without glue is possible with Label-Dri machine which utilizes vacuum pickup and thermostatically controlled heating surface to soften thermoplastic-coated labels before application to container or product. Plasticizing of coating occurs while label is being lifted from hopper. Machine can apply labels to plastic and cloth and can be obtained in two models: semiautomatic unit which operates by hand at capacity of 60 labels per minute, and high speed machine which is capable of applying labels to cylindrical containers at speed in excess of 300 per minute. Made by **New Jersey Machine Corp.**, Thirteenth St. & Willow Ave., Hoboken, N. J.

For more details circle NED-2438 on enclosed inquiry slip

AIR PRESS
nonrepeat device protects operator

Operating mechanism of Air Act press embodies positive nonrepeat arrangement whereby operator must remove his foot from foot treadle before press is ready to make another cycle. This device can be arranged to run on continuous cycle if desired. Safety guard arrangement makes it impossible to trip press if operator's hand is under tooling.

Ram stroke is adjustable from 2 to 3 in. as standard, but greater adjustment can be furnished if desired. Ram pressure can be varied and is adjustable to give either positive or negative blow action. Automatic dial feed or roll feed is easily adapted to machine. Illustrated model 20 delivers impact blow of approximately 3½ tons at 80-psi air pressure. Made by **Bieber & Dresback**, Dept. NED 501, 616 Riverside Ave., Westport, Conn.

For more details circle NED-2439 on enclosed inquiry slip

HYDRAULIC SCOOP SHOVEL
for bulk handling of loose materials

This hydraulically operated Scoop-Shovel accessory is attached easily to Lift King and Worksaver electric and gasoline fork trucks for shoveling, scooping, lifting, moving, and dumping sand, coal, gravel, grain and dry chemicals. Scoop can handle up to 27 cu ft of material and tilts upward from horizontal scooping position to cradle load during transport and downward to discharge load completely when dumping. It can dump loads into bins, vats and hoppers at heights up to 130 in. Made by **Yale & Towne Mfg. Co.**, Philadelphia Div., Dept. M-1, Roosevelt Blvd. & Haldeman Ave., Philadelphia 15, Pa.

For more details circle NED-2440 on enclosed inquiry slip

THIS POINT WILL END YOUR LOOSE SET SCREW PROBLEMS

UNBRAKO

SELF-LOCKING HOLLOW SET SCREW WITH MONEY-SAVING KNURLED POINT "WON'T SHAKE LOOSE"

See us at Space 128, A.S.T.E. Exposition, April 10-14, Convention Hall, Philadelphia

SPS STANDARD PRESSED STEEL CO.
JENKINTOWN 24, PENNSYLVANIA

For more details circle NED-2441 on enclosed inquiry slip

WHERE RUGGEDNESS RATES!

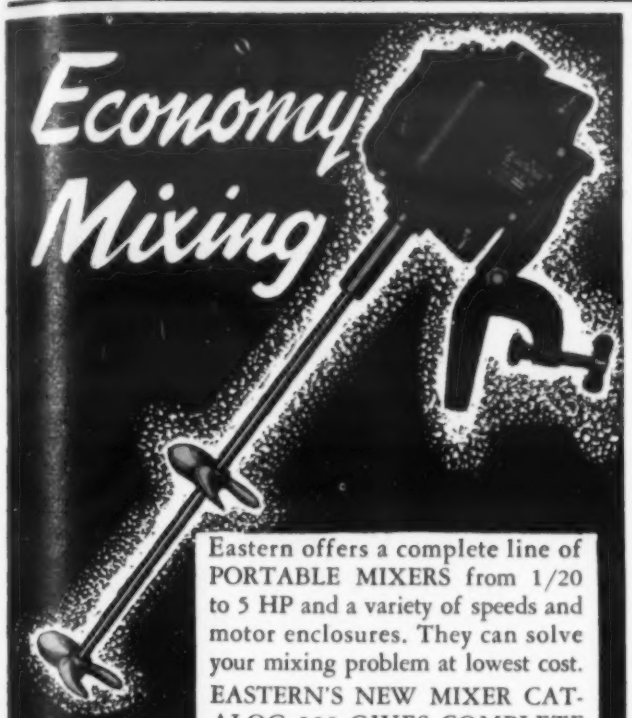
it's WESTON
All-Metal Thermometers

Where the going is tough, WESTON thermometers get first call. Their rugged construction—all-metal throughout—enables them to stand up on pumps, compressors and mobile units. And the big, bold dials are easy to read—quickly and accurately! There are many types, stem lengths and scale ranges from which to choose. Ask your jobber or local WESTON representative, or write for Thermometer Bulletin. WESTON Electrical Instrument Corporation, 663 Frelinghuysen Avenue, Newark 5, N. J.

CONTACT-MAKING models for alarm or control purposes. MAX-MIN models to indicate highest or lowest temperature reached.

WESTON Instruments

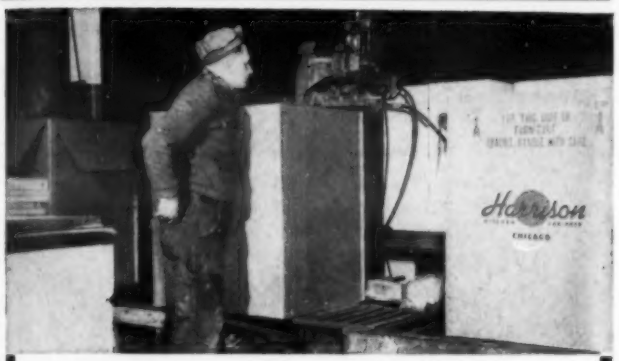
For more details circle NED-2442 on enclosed inquiry slip



Eastern offers a complete line of PORTABLE MIXERS from 1/20 to 5 HP and a variety of speeds and motor enclosures. They can solve your mixing problem at lowest cost. EASTERN'S NEW MIXER CATALOG 500 GIVES COMPLETE MIXER SELECTION INFORMATION, WRITE TO DEPT. RB

Eastern INDUSTRIES INC.
REGENT ST. EAST NORWALK, CONN.

For more details circle NED-2443 on enclosed inquiry slip



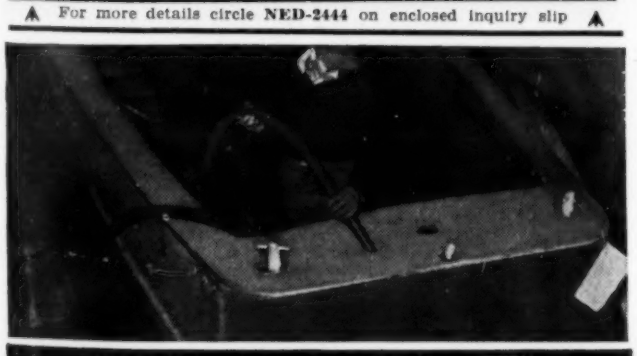
SHIP IN BIG CARTONS?

The bigger the cartons the bigger the savings, when you close them with an International Retractable Anvil Staple Machine. Picture, if you will, how cumbersome and difficult the closing of these cartons would be by any other method . . . here one operator does the job in just a few seconds (400 cartons per hour).

Added savings are realized by the cartons remaining *flat* until ready for use . . . International Staple Machines close both the tops and bottoms simultaneously, from the outside! And what is most important, a neat and secure closure is effected *every time*.

INTERNATIONAL STAPLE AND MACHINE COMPANY
HAVERTOWN 2, PENNA.
Distributors in Principal Cities

For more details circle NED-2444 on enclosed inquiry slip



CLEANING BEFORE PAINTING WITH VACUUM

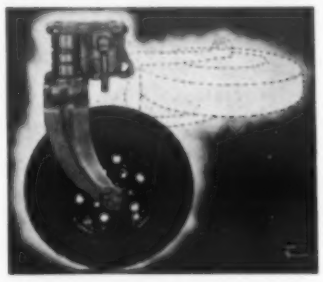
This Spencer 1 ½ Portable has speeded boat building by cleaning before painting. It reduces the number of work hours on each boat and the number of hours the boat is in the shop. On larger boats, Spencer has been used to remove steel shot used for blasting before painting. The capacity per hour for this kind of work is measured in tons. Other products cleaned before painting include metal doors, enamelling operations, ceramics and many others. Particularly useful in the paint spraying department to prevent dust from spoiling the product.

356-X

150 USES FOR VACUUM . . . ASK FOR BULLETIN
THE SPENCER TURBINE COMPANY • HARTFORD 6, CONNECTICUT
SPENCER HARTFORD

For more details circle NED-2445 on enclosed inquiry slip

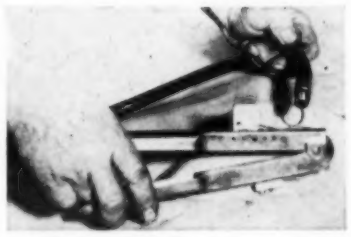
TRAILER LANDING GEAR provides retractable third wheel



Recommended for use with heavy portable industrial equipment such as compressors, generators, pumps and concrete mixers, this swivel-caster assembly can be attached easily to all types of two-wheel single-axle trailers. When trailer equipped with one of these units is attached to towing vehicle, wheel and fork can be retracted full 90 degrees and swiveled 90 degrees to assure clearance of all road obstructions. Snap-action positioning pin positively locks gear in either down or retracted position. Gear has 18½-in. height in down position and is regularly furnished with 12-in. diameter 3.50 x 6-in. pneumatic tire of either two or four-ply constructions that have load capacities of 315 and 490 lb, respectively. Made by **United Mfg. Co.**, 10 W. Interstate St., Bedford, O.

For more details circle NED-2446 on enclosed inquiry slip

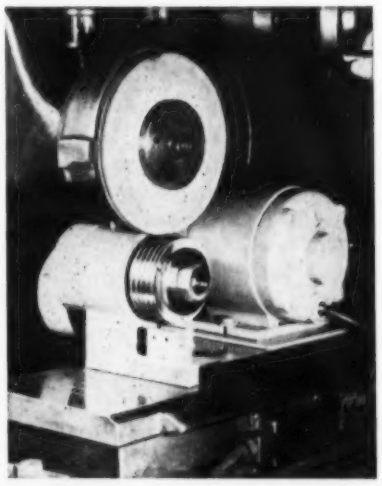
HOSE FERRULE CRIMPER is portable hand-operated tool



Designed for crimping metal ferrules when making on-the-job hose repairs or installations, this portable ferrule crimping tool is recommended as convenient aid for plant maintenance and installation men. It utilizes as crimping medium two strands of music wire in loop form attached to operating handle in such a way that closing handle contracts loop. Loop sizes vary to permit servicing hoses from ½ to 1½ in. OD. Made by Schrader's Son Div., **Scovill Mfg. Co.**, 471 Vanderbilt Ave., Brooklyn 17, N. Y.

For more details circle NED-2447 on enclosed inquiry slip

GRINDING WHEEL CRUSHER forms wheels up to 1¼-in. wide

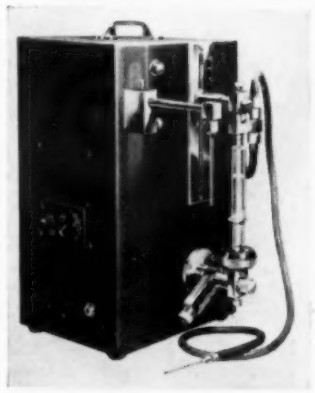


Roll arbor of portable unit for crush forming grinding wheels is mounted with heavy duty precision Timken roller bearings for maximum load. Base of unit is square on sides and parallel with roll arbor for quick alignment on any type of surface or cylindrical grinder. While standard unit is intended for wheels up to 1¼-in. wide, wider wheels can be formed by addition of longer roll spindle. Unit is equipped with ⅛-hp 115-v 60-cycle single-phase motor with toggle switch and 8-ft extension cord and plug.

Universal crusher roll for various radii and shapes can be supplied also. One 1¼-in. wide roll for radii forming will develop half-spherical radius from 0.001 to 0.0625-in. by inserting wire of correct dimension in groove in roll. Made by **Jerpbak-Bayless Co.**, 153 Bell St., Chagrin Falls, O.

For more details circle NED-2448 on enclosed inquiry slip

PORTABLE FILLING MACHINE delivers measured amount of liquid



Designed to fill vials or ampules with liquid on production basis, this portable Filamatic filling machine employs thyratron type speed control. This electronic control gives stepless variable speed at full torque and allows filling speeds of 500 to 5000 deliveries per hour. Micrometer adjustment permits deliveries from 0.025 to 50 cu cm with accuracy of plus or minus ½ per cent. Entire filling mechanism including valve, syringe and tubing can be disassembled easily and quickly for cleaning and sterilizing. Machine can be used for either tray or fixed position filling. Made by **S. Rosen & Associates**, 5005B Queensbury Ave., Baltimore 15, Md.

For more details circle NED-2449 on enclosed inquiry slip

HARDEST IN THE WORLD
DEFIES WEAR

SELF PERPETUATING FERROUS HARDENED NATURAL EMERY STONE CONCRETE

Here is something entirely new which is revolutionizing the design and maintenance of concrete traffic surfaces.

Send for free descriptive literature today.

FLASH-STONE COMPANY, INC.
3723 Pulaski Ave., Philadelphia 40, Pa.

For more details circle NED-2450 on enclosed inquiry slip

"We Saved Valuable Space . . . and reduced the cost of a new panel board . . . by installing 400 amp. FUSETRON dual-element Fuses instead of 600 amp. ordinary fuses."

"After we were awarded the contract for electrical work in a new ice plant, we found the power distribution panel was far too large for the space allotted to it. This panel accommodates two 60 H.P. motors, plus several smaller ones.

"We refigured the panel size based on using Fusetron dual-element Fuses. We reduced the panel sections for the 60 H.P. motors from 600 amp. fuses to 400 amp. Fusetron fuses and reduced the sizes for the other motors in proportion.

"The panel fitted the space easily — thus saving space and reducing the cost of the panel."

E. H. Brown, Vice President
Sanborn Electric Company
Indianapolis, Indiana

Fusetron DUAL-ELEMENT Fuses

Give All-Purpose 10 Point Protection

1 Protect against short-circuits.
2 Protect against needless blows caused by harmless overloads.
3 Protect against needless blows caused by excessive heating —lesser resistance results in much cooler operation.
4 Provide thermal protection — for panels and switches against damage from heating due to poor contact.
5 Protect motors against burnout from overloading.
6 Protect motors against burnout due to single phasing.
7 Give DOUBLE burnout protection to large motors — without extra cost.
8 Make protection of small motors simple and inexpensive.
9 Protect against waste of space and money — permit use of proper size switches and panels.
10 Protect coils, transformers and solenoids against burnout.

DON'T RISK LOSSES

FUSETRON
TRUSTWORTHY NAMES IN ELECTRICAL PROTECTION
BUSS

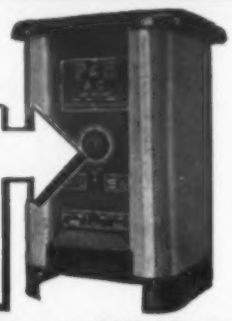
One needless shutdown . . .
One lost motor . . .
One destroyed switch or panel . . .
May cost you far more than replacing every ordinary fuse with a FUSETRON dual-element fuse.

Protect yourself by installing them in every set of fuse clips throughout the entire electrical system.

FUSETRON is a trade mark of
BUSSMANN MFG. CO.,
Division of McGraw Electric Co.
University at Jefferson St. Louis 7, Mo.

For more details circle NED-2451 on enclosed inquiry slip

Dial-lectric
your way to
Lower Welding Costs



Advantages of P&H AC Arc Welders

- "Dial-lectric" Control
- Quick Start Arc
- Guaranteed Capacity
- Handy Off-On Switch
- Simplified Design
- Sturdily Built
- Connectible for 220 or 440 Volts
- No Moving Parts
- High-low Welding Range
- Remote Control
- Compact Arrangement
- Attractively Styled
- NEMA rated

. . . use a new P&H AC arc welder with built-in remote control — save power, save space, save welding time

Thanks to this new design, moving parts have been eliminated. There are no moving coils or cores, no sprockets or worms, no chains or levers to wear or get out of kilter. P&H's Dial-lectric design assures trouble-free service day in and day out. Here are additional features that save you money:

Speeds your work — uses larger electrodes —Quick-starting, stable arc permits use of higher amperages and correspondingly larger electrodes. Your work is done faster. **Saves power** — High electrical efficiency greatly reduces the cost of power for you. **Conserves operator effort, but accomplishes more** — The remote control feature of the Dial-lectric design provides full arc control at the work. There is no walking back and forth to make adjustments.

Dial-lectric your way to lower welding costs. Put a new P&H AC arc welder in your shop. Four models are available, ranging from 20 to 625 amps. See your nearby P&H representative or distributor soon.

Write us for latest bulletins.

P&H ARC WELDERS
4537 W. National Ave.
Milwaukee 14, Wisconsin
HARNISCHFEGER CORPORATION

▲ For more details circle **NED-2452** on enclosed inquiry slip ▲

READY TO
STAKE
CUT
SWAGE
CRIMP
RIVET
MARK

ELECTROPUNCH

A LIGHTNING-FAST ELECTRIC IMPACT HAMMER

The Production Tool with 1000 uses—

- Low Priced
- Plug-in Units
- Controllable impacts up to a ton
- Higher power units engineered

BLACK & WEBSTER, INC.
301 PLEASANT STREET, NEEDHAM 92, MASS.

▲ For more details circle **NED-2453** on enclosed inquiry slip ▲

NO EXTRA VALVES TO BUY

BELLOWS Air Motors are complete air cylinder power units. Valve, valve operating controls and speed controls are built-in. No extra valves to buy. Only one air connection required. Available with either manually-controlled air valve or electrically-controlled air powered air valve. Five bore sizes: 1¼", 1¾", 2¼", 3⅝", 4½". Any stroke length.

• *Write for Bulletin BM 30 Dept. NED-450.*

The Bellows Co.
AKRON 9, OHIO

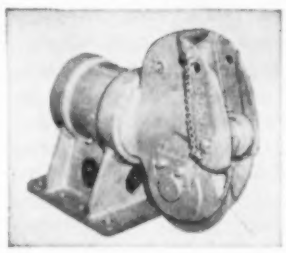
▲ For more details circle **NED-2454** on enclosed inquiry slip ▲

HORIZONTAL INDEXING UNIT
permits wide range of tooling

Developed for use on universal drilling, tapping and threading machines, No. 14 horizontal indexing unit can be used also on other equipment for drilling, reaming, countersinking and tapping operations. Illustrated representative parts show awkward stampings that previously could not be dial fed rapidly. Design simplifies tooling to considerable extent through ease of change-over, setup, loading and unloading. Not shown are multihole drilling setups that require accuracy and spacing. These are tooled to allow one operator to feed three or four machines. Made by **Snow Mfg. Co.**, 437 Eastern Ave., Bellwood, Ill.

▲ For more details circle **NED-2455** on enclosed inquiry slip ▲

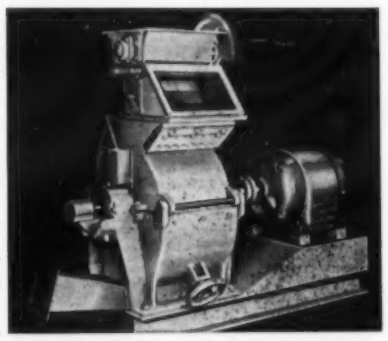
STEEL FAIRLEADER
in sizes for ⅝ to 1½-in. wire rope



Having throat large enough to pass joint made up with Crosby wire rope clips, this fairleader is useful for mooring and anchor lines on barges, log snaking, carpuller and barge mover lines, pulling piles and other applications where offlead is necessary or where more universal swiveling is required than is possible with snatch block. Sheave and head are mounted on antifriction bearings, and unit is designed to withstand full strength of rope. Made by **American Hoist & Derrick Co.**, 65 S. Robert St., St. Paul 1, Minn.

▲ For more details circle **NED-2456** on enclosed inquiry slip ▲

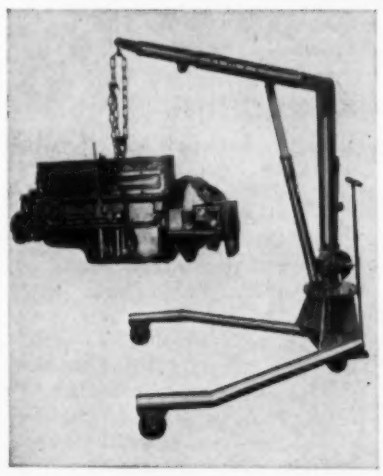
HAMMER MILL
withstands high production use



Since heavy cast-iron bearing housings are machined as integral part of base of model HD hammer mill, antifriction bearings are held in perfect alignment at all times. Two types of pneumatic product-collecting systems are available: conventional type with blower fan mounted on mill and including two-way bagger and Pneu-Vac system which assures peak grinding capacity, maximum collecting efficiency and minimum maintenance. Mill can be equipped for belt drive or direct connection to 50-75-hp motor. Rotor speed is 3500 rpm and width 18 in. Overall length of machine is 8 ft 6 in. and width 3 ft 4 in. Made by **Sprout, Waldron & Co.**, 179 Sherman St., Muncy, Pa.

▲ For more details circle **NED-2457** on enclosed inquiry slip ▲

¾-TON HYDRAULIC HOIST
can be used as shop or truck unit

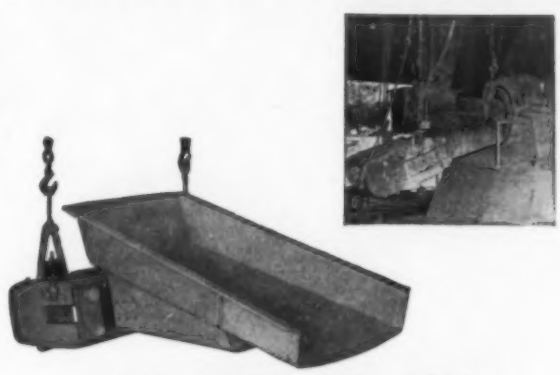


This hand-operated hydraulically powered Utility hoist can be used on three-wheel tubular steel floor frame or converted quickly for use on truck beds, work benches and loading docks. It will lift ¾-ton load 77½ in. in 45 seconds; and by using short hook-up, 2000 lb can be lifted 52 in. in 45 seconds.

Hydraulic cylinder has O-ring seals on piston rods, heads and other points where static sealing is required. Hoist frame is heavy tubular steel with reinforcing for added safety. When unit is mounted on truck, 45-in. boom will swing in full circle. Overall height is low enough to permit trucks to pass through doorways without bumping overhead. Wheels on floor frame are equipped with needle bearings that will not bind even under maximum loads. Made by **Unit Mfg. Co.**, Dept. I-7, 1229 Harmon Place, Minneapolis, Minn.

▲ For more details circle **NED-2558** on enclosed inquiry slip ▲

SYNTRON
"Vibra-Flow"
VIBRATORY FEEDERS



WILL SPEED UP YOUR MATERIAL HANDLING

—by handling a range of materials from light, fine powders to heavy, bulky rock, etc.
—by permitting the operator to adjust the material flow to suit the capacity of crushers, grinders, belt conveyors, screens, etc.

Write for catalog literature.

SYNTRON CO., 405 Lexington, Homer City, Pa.

▲ For more details circle **NED-2459** on enclosed inquiry slip ▲

TRY, SEE, SAVE, IMPROVE

More and more metalworking, woodworking and plastics products manufacturers are using BRIGHTBOY *rubber-cushioned* abrasives to offset rising costs, increase profits:

Burring • Finishing • Cleaning • Polishing
In One Operation

A perfectly balanced *combination* of abrasive and rubber, Brightboy is used following the rough grind. It:

1. *Bridges the gap between the rough grind and the buff in one operation.*
2. *Works to close tolerances; can be shaped to contour.*
3. *Produces a wide variety of conventional and special finishes and patterns; frequently the final polish.*
4. *Requires no before-use preparation or dressing; no skilled labor to handle it.*

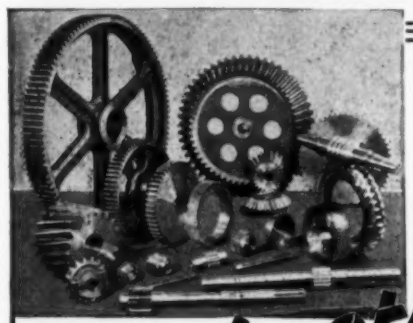
MAKE TESTS • GET COSTS
SEE SAVINGS
COMPARE QUALITY

Ask your dealer for samples and the Brightboy catalog manual, explaining work short-cuts. Write the Brightboy Service Department on any methods or production problem where finishing is involved.

BRIGHTBOY INDUSTRIAL DIVISION
WELDON ROBERTS RUBBER CO.
NEWARK 7 N. J.
America's Pioneer Manufacturers of Rubber-Bonded Abrasives

WELDON ROBERTS
Brightboy

▲ For more details circle **NED-2460** on enclosed inquiry slip ▲



"Industrial"
GEARS-RACKS SPROCKETS

Today is a "buyer's market". Everyone is more quality conscious . . . more selective. As far as Gears, Sprockets and Racks are concerned, we like the "quality conscious" attitude because that's where INDUSTRIAL Gears stand the "TEST". They're cut right—and pay dividends in satisfaction.

We produce Gears to Steel Mill Hardness Specifications if you need that kind. Get acquainted with our service—you'll like it!

Write for a Pictorial Trip through our large Plant.

INDUSTRIAL GEAR MFG. CO. 4541 Van Buren St. Chicago 24, Illinois
MANUFACTURERS OF
Fine Cut Gears for Machinery Builders: Spur, Helical, Bevel, Mitre, Worms, Worm Gears, Racks, Silent Chain Wheels and Special Sprockets.

▲ For more details circle **NED-2461** on enclosed inquiry slip ▲

IMPROVE YOUR OVERHEAD CONVEYOR SYSTEM—

Specify LINK-BELT Ball Bearing Trolleys

The simplified, drop-forged Link-Belt ball bearing trolley will help you reduce your maintenance costs. With bearings adequately lubricated and sealed, operation is smooth, quiet and efficient. Easily and quickly installed on new or existing systems. Low initial cost and extremely long life expectancy.

11,809 **Send for Folder 2241-B.**

LINK-BELT COMPANY

Chicago 8, Indianapolis 6, Philadelphia 40, Atlanta, Houston 1, Minneapolis 5, San Francisco 24, Los Angeles 33, Seattle 4, Toronto 8. Offices, Factory Branch Stores and Distributors in Principal Cities.

For more details circle NED-2462 on enclosed inquiry slip

Find out for yourself....

why people who try it BUY IT!

You've used regular "mikes" for such a long time you'll be amazed at the downright accuracy and plain honest-to-goodness convenience you can get with this CONSTANT PRESSURE, INDICATING MICROMETER. Once you've used it you'll recognize its superior accuracy — and you'll appreciate the convenience of reading an indicator instead of barrel graduations. You'll see how easy it is to check out-of-round and taper, too. You'll also be pleased with the usefulness of the pushbutton Retracting Anvil and the Tolerance Hands when measuring duplicate parts. You don't have to take our word for it. Find out for yourself. Ask to see the Federal MIKEMASTER . . . and try it on your work. Write to Federal Products Corporation, 1174 Eddy Street, Providence 1, R. I.

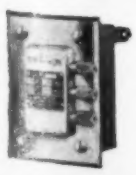
FEDERAL

Largest manufacturer of indicating type gages . . . exclusively.

For more details circle NED-2463 on enclosed inquiry slip

R&S SWITCHES Type EFS

Complete Line EXPLOSION-PROOF Class 1, Groups C & D



Meet ALL Standards PLUS

FLEXIBILITY of outlet sizes and locations, and on the job conduit drilling.

INTERCHANGEABLE gang form assemblies and combinations with other EFS Push Button Stations, Pilot Lights and Manual Starters, etc.

SURFACE AND FLUSH mounting.

EXTERNAL LUGS for mounting.

SILICONE COATED STAINLESS STEEL SHAFTS insure permanent free operation under all conditions of temperature and corrosive vapors.

CORROSION RESISTANT baked enamel finish.

DEPENDABLE OPERATION insured by 48 years of design and manufacturing experience.

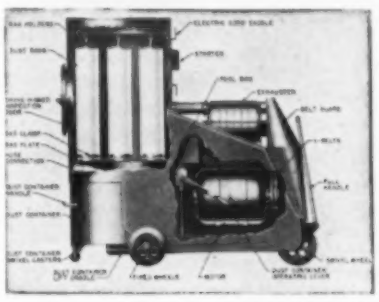
Write for catalog **H47-15**

A4

RUSSELL & STOLL COMPANY, INC.
Precision-Built Electrical Equipment
125 BARCLAY STREET, NEW YORK 7, N. Y.

For more details circle NED-2464 on enclosed inquiry slip

PORTABLE VACUUM CLEANER provides 4.4 cu ft of dust storage



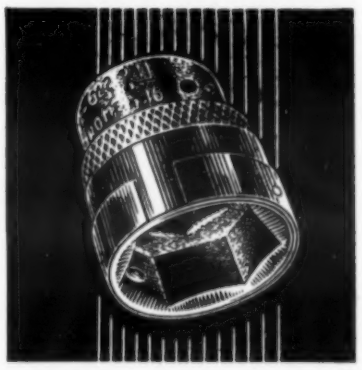
Powered by 3-hp motor, Hoffco-Vac No. 30 heavy duty industrial vacuum cleaning machine is designed for continuous operation on heavy dust deposits. It will operate one 50-ft length of 1½-in. vacuum hose and has nine dust bags which have total surface area of 30 sq ft.

Multistage centrifugal type vacuum producer is made of aluminum castings and is equipped with self-lubricated ball bearings. Motor operates exhauster through multiple V-belt drive, and both are supported on rubber cushions for smooth quiet operation. Vacuum of 6 in. of mercury is developed at machine.

Machine is compactly designed for maneuvering through congested areas and is equipped with two fixed and one swivel wheel. Hose-carrying rack and box for cleaning tools are incorporated. Made by **United States Hoffman Machinery Corp.**, 105 Fourth Ave., New York 3, N. Y.

For more details circle NED-2465 on enclosed inquiry slip

NUT, PLUG & BOLT SOCKET firmly holds these parts in place



Designed with two spring-tension pins in socket wall to grasp component securely, Hold-It socket eliminates dropping and losing nuts, plugs and bolts while starting or removing them. At present socket is available in ¾ and 11/16-in. six-point sizes and is recommended for many industrial and automotive applications. Made by **Bingham-Herbrand Corp.**, Herbrand Div., Fremont, O.

For more details circle NED-2466 on enclosed inquiry slip

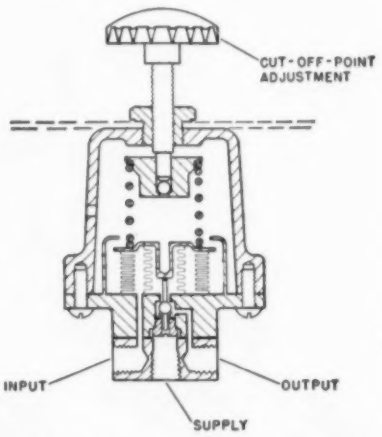
FLEXIBLE SHAFT MACHINE entire drive is fully enclosed

Motor is placed low on tripod base of WYCO Lo-Gravity flexible shaft machine so that unit can not be tipped over when transported over uneven floors or when pulled by flexible shaft. Since base is constructed so that any motor of suitable horsepower will fit, machine can be supplied with or without motor as desired. Base swivels on large ball bearing and has tool tray. Jackshaft has eccentric belt adjustment. Locking clamp on top of machine holds handpiece firmly so that machine can be used also for stationary grinding. Quick-change feature is standard equipment on handpieces and angle heads furnished with machine. Made by **Wyzenbeek & Staff, Inc.**, 849 W. Hubbard St., Chicago 22, Ill.

For more details circle NED-2467 on enclosed inquiry slip

PNEUMATIC RELAY usable with air-electric switches

Recommended for use with equipment requiring accurate high speed operation such as air gages that operate signal lights or sorting mechanisms, this pneumatic relay provides sharp cut-off action. Cut-off point can be set for any pressure between 0 and 35 psi, and overloading up to 70 psi will not damage instrument. Design provides high amplifying ratio so that small change in input pressure results in full change in output. When used with high magnification type Moore pneumatic comparator gage and commercial pressure switch, this relay will operate signal light on dimension change as small as 0.000002-in. Made by **Moore Products Co.**, 920 E. Lycoming St., Philadelphia 24, Pa.



For more details circle NED-2468 on enclosed inquiry slip

Here's Magnetic Protection Against Tramp Iron At LOWEST POSSIBLE COST!

Chocolate going over Perma-Plate at rate of 10,000 lbs. hr. Magnet picks up various forms of iron filings.

Dings Perma-Plate Magnet

NON-ELECTRIC • PERMANENT • LIGHTWEIGHT

ABOLISH tramp iron threats to your machinery. Gain constant, permanent protection at low cost. The Dings Perma-Plate requires no electricity—no electrical accessories—no maintenance.

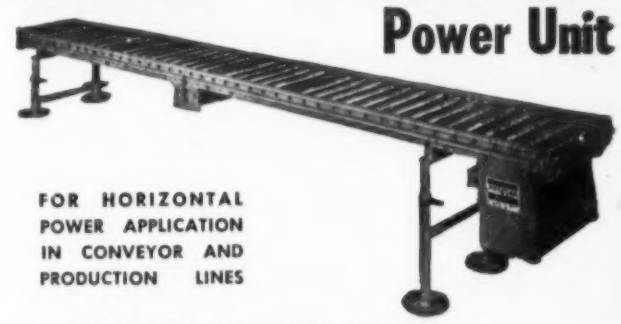
Easily installed in chutes, ducts, trays, spouts, over conveyor belts, etc., the powerful Perma-Plate gives you *maximum* tramp iron removal—gives you CERTIFIED magnetic strength, GUARANTEED magnetic permanence. Learn the details—SEND for BULLETIN.

DINGS MAGNETIC SEPARATOR COMPANY
4758 W. Electric Ave., Milwaukee, Wis.
All Types of Electric and Non-Electric Magnetic Separators for Every Purpose.

Dings Certified

For more details circle NED-2469 on enclosed inquiry slip

METZGAR "LIVE-ROLLER" Power Unit



FOR HORIZONTAL POWER APPLICATION IN CONVEYOR AND PRODUCTION LINES

Metzgar "Live-Roller" Power Units offer a wear-resisting metal transmission surface that outlasts belt type units many times over for handling hot or sharp edged articles.

They are offered in various lengths and are readily adjustable for height.

Rollers may be specified for any spacing (1 to 5 Rollers per foot) either above or below the channel frame.

For economy in power units, your best buy is a Metzgar.

WIDTH 11½"; 15"; 18"; 24"
•
BALL-BEARING THROUGHOUT
•
MORE DURABLE THAN BELT TYPE
•
PERMANENT OR PORTABLE BASE

For full specifications and price, write for Folder No. 1249.

METZGAR CONVEYORS

METZGAR CO.
416 Douglas, N. W.
GRAND RAPIDS 4, MICH.

For more details circle NED-2470 on enclosed inquiry slip

MILL IT ON YOUR LATHE WITH A PALMGREN MILLING ATTACHMENT

CONVERT LATHE IN 10 SECONDS.

Now — you can do milling, slotting, grinding, grooving, squaring shafts, sawing at angles, and many other important operations on your lathe. PALMGREN MILLING ATTACHMENT is a necessary fixture for small shops, schools and emergency work in large plants. Fits South Bend, Atlas, Craftsman, Logan, Sheldon and all other makes. It has graduation for rotary angle adjustments, also graduated feed and adjustment screw. Easily mounted by straddling lathe's regular tool post. Try one—it will quickly pay for itself.

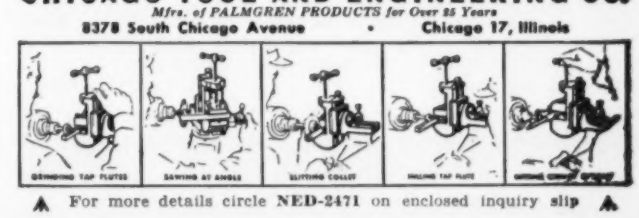
No. 250

IMMEDIATE DELIVERY

Nos.	Width Jaws	Depth Jaws	Jaws Open	Weight Pounds	Base Opening	Price F.O.B. Factory
150	1½"	1"	1⅝"	6½	1"	$18.75
250	2½"	1 7/16"	2½"	11	1½"	24.75
400	4"	1½"	4"	25	2"	39.75

Order from your dealer or jobber. Write for circular No. 354

CHICAGO TOOL AND ENGINEERING CO.
Mfrs. of PALMGREN PRODUCTS for Over 25 Years
8378 South Chicago Avenue • Chicago 17, Illinois



For more details circle NED-2471 on enclosed inquiry slip

with the

JAY-DEE

Tapping Attachment

Jay-Dee employs an entirely new clutch principle, designed specifically to eliminate tap breakage. Instead of using coiled springs to provide driving pressure, it has a resilient material . . . 150 times more effective than steel . . . to produce safe torques at all times. This new attachment is simple as well as safe; definite torque settings for given tap sizes and taps can be changed in a few seconds without wrenches.

Can be used for horizontal or vertical tapping, stud driving, blind or through holes—on all reversible machines.

LARGE TAP RANGE K-1 unit handles taps ½"-1¾" USS, a range normally requiring three attachments. Other units also available.

Guaranteed for 12 Months!

FREE *Bulletin with full details. Yours for the asking.*

THE Wickman MANUFACTURING CO. 15533 WOODROW WILSON AVE. DETROIT 3, MICHIGAN

For more details circle NED-2472 on enclosed inquiry slip

Get this

for file reference on small tubing availabilities!

This handy four page file size folder describes the world's broadest line of analyses, forms, sizes, etc. made by the largest manufacturer of specialty metal tubing. Anyone to whom tubing is an important component or who is contemplating use of tubing should have this folder handy. Superior offers you technology in small tubing. Send for Bulletin 31.

Superior

THE BIG NAME IN SMALL TUBING

All analyses .010" to ⅝" O.D.
Certain analyses (.035 max. wall) up to 1⅜" O.D.

SUPERIOR TUBE COMPANY
2018 Germantown Ave. Norristown, Pa.

For more details circle NED-2473 on enclosed inquiry slip

Be "COST-WISE"! PALLETIZE

WITH

Weld-Bilt

Pallet Type

HYDRAULIC LIFT TRUCKS

You'll handle a greater variety of pallets easier and faster with a WELD-BILT Pallet Truck! The slim, sturdy forks, with their greased-for-life ball bearing wheels, are designed to enter all types of single or double-faced pallets.

Some of the features that prove WELD-BILT extra value include: front wheel equalizer, accelerator type lowering pedal, multi-stroke hydraulic lift, "anti-kick-back" safety handle, instant-free handle release, shockproof mounting of hydraulic unit—and many others. They help you to time and labor savings, and promise longer service.

Write today for complete details on WELD-BILT Pallet Trucks, in capacities of 2000, 4,000 and 6,000 lbs. . . . for "Cost Wise" Palletizing. Bulletin 311.

OTHER WELD-BILT PRODUCTS—
HYDRAULIC LIFT TRUCKS
SINGLE STROKE TRUCKS
PORTABLE ELEVATORS
FREIGHT ELEVATORS
SKID PLATFORMS
PLATFORM TRUCKS
TWO-WHEEL TRUCKS
STORAGE RACKS

WEST BEND EQUIPMENT CORP.
220 Water Street, West Bend, Wisconsin
MATERIALS HANDLING ENGINEERS

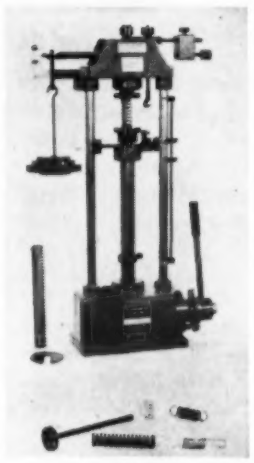
For more details circle NED-2474 on enclosed inquiry slip

FLUORESCENT MAGNIFIER provides shadow-free work light

Designed for assembly, inspection, toolmaking and other close work, this fluorescent magnifier floodlights work area with focused light while magnifying work through 5-in. diameter lens. It can be obtained as bench type having steel base, two adjustable friction arms and two swivels that permit adjustment to any desired position and as portable type similar to bench type except that it is fitted with hardwood handle in place of arms and base. Unit is furnished with 6-ft rubber cord and ballast plug ready for use in any 110/120-v 60-cycle circuit. Made by **Industrial Products Co.**, 2807 N. Fourth St., Philadelphia 33, Pa.

For more details circle NED-2475 on enclosed inquiry slip

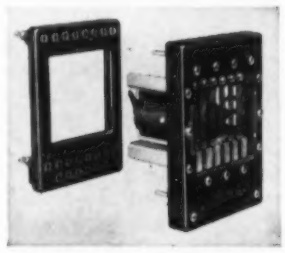
SPRING TESTING MACHINES for quantity production testing



Two redesigned machines for testing loads and deflections of compression and extension springs can be used for general purpose testing. Capacity of type R80 is from ½-oz to 175 lb and type RS-5, from 1/64-oz to 12½ lb. Both units can accommodate springs 12 in. long under test. Speed of operation is up to 800 spring tests per hour. Machines are essentially precision beam balances of simple lever type using fulcrum, knife edges and dead weights. Vertical shafts slide in ball bearings to eliminate tilting or jamming, and automatic stops can be set for rapid production testing. Centering rod to reduce buckling in long compression springs is supplied. Made by **Carlson Co.**, 275 Broadway, New York 7, N. Y.

For more details circle NED-2476 on enclosed inquiry slip

HIGH SPEED RELAY operates at 6 to 8 milliseconds



Originally built as component of Mark II 'mechanical brain' for Navy Department, HHA ultra high speed relay has minimum life of 100 million operations. Six single-pole double-throw contacts are arranged side-by-side to provide 28 different contact combinations. Coiled beryllium spring in face of core presses against back of armature to provide needed contact pressure. Individual contacts and prongs are of one-piece construction, and each contact provides its own prong for jack-connecting to circuit. Contacts are fully protected yet plainly visible through glass cover set in Bakelite frame of relay. Coils can be furnished for 24 to 150-v dc. Made by **Autocall Co.**, 4761 Tucker Ave., Shelby, O.

For more details circle NED-2477 on enclosed inquiry slip

INCANDESCENT LAMP combines light source and shield

Currently made in 50-w size, this 50GA inncandescent electric light employs unique shape and enamel finish to direct two-thirds of bulb's light upward to create pleasant indirect lighting effect. It is designed for use in two-to-five-light ceiling fixtures in which bare bulbs in base-up position are now used. Bulb has 3½-in. diameter at its widest point; and when viewed in its recommended base-up position, it resembles inverted mushroom. Lower portion of bulb is covered with soft-toned permanent enamel finish which mellows light. It will be available through retail outlets early in May and will list for 40 cents. Made by **General Electric Co.**, Lamp Div., Dept. 166-NED, Nela Park, Cleveland 12, O.

For more details circle NED-2478 on enclosed inquiry slip

How to use ball bearings without costly machining or extra parts

You can add ball bearing smoothness, power saving and maintenance savings to many machines easily, economically with Fafnir Ball Bearing Power Transmission Units. These units incorporate the easiest of all bearings to install and remove . . . Fafnir Wide Inner Ring Ball Bearing with Self-Locking Collar. They slip fit over shafts, lock in position with a simple twist of the collar. Available in pillow blocks, cartridges, hanger boxes, flange cartridges, eccentrics and take-up units.

Call your nearby Fafnir distributor or write for literature.
The Fafnir Bearing Company, New Britain, Connecticut.

FAFNIR

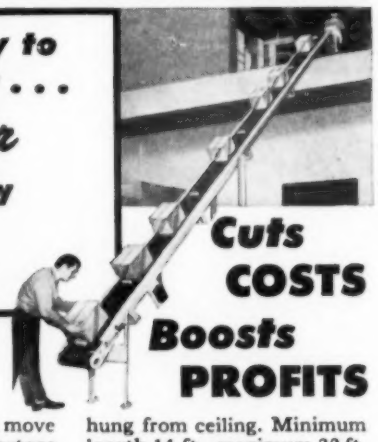
BALL BEARINGS

MOST COMPLETE LINE IN AMERICA

For more details circle NED-2479 on enclosed inquiry slip

Modern way to save money . . .

Farquhar **medium duty PACKAGE CONVEYOR**



Cuts COSTS

Boosts PROFITS

If you're looking for an easier, faster, *cheaper* way to move bags, bales, boxes, cartons and bundles up to 75 pounds, get this Farquhar Model 436 Package Conveyor on the job and watch your handling costs hit rock bottom!

The Farquhar Model 436 is especially designed for all types of portable or semi-permanent materials handling installations. Heavy, two-ply rubber covered belt is 12" wide, carries units up to 75 pounds at standard speed of 78 feet per minute. Belt is supplied with or without cleats. Standard center support provides great stability, may be attached to floor or hung from ceiling. Minimum length 14 ft., maximum 32 ft.

For information on this money-saving Farquhar Model 436 Conveyor — or other Farquhar Conveyors for *all* bulk and packaged materials handling—write to:

A. B. FARQUHAR COMPANY, 204 Duke St., York, Pa., or 620 W. Elm St., Chicago, Illinois.

Farquhar **CONVEYORS** *SAVE YOU MONEY*

HYDRAULIC PRESSES, FARM EQUIPMENT, FOOD PROCESSING AND SPECIAL MACHINERY

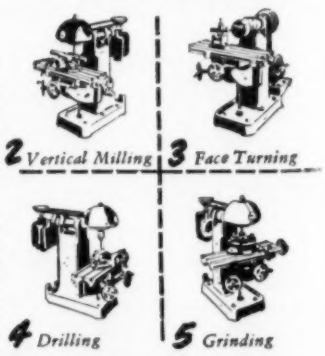
For more details circle NED-2480 on enclosed inquiry slip

One BENCHMASTER ANSWERS Five EVERY-DAY SHOP REQUIREMENTS

Your little Benchmaster pinch-hits for almost any tool in the shop, saving time, eliminating the need for extra machines, cutting your costs to the bone.

1 *Horizontal Milling*

With its two interchangeable spindles, *Benchmaster* mills both HORIZONTALLY and VERTICALLY; serves as a GRINDER, DRILL PRESS or LATHE. In fact, BENCHMASTER is almost a complete shop in itself!



Good, husky spindle construction with Timken Tapered Roller Bearings is one answer to Benchmaster's extra versatility. Built to .001" tolerance, Benchmasters are precision fitted in every part, assuring surprising accuracy and metal-removing ability —whether it's *milling, drilling, turning or grinding!*

GET THE FACTS ON BENCHMASTER NOW!

Write Dept. NED for circular.

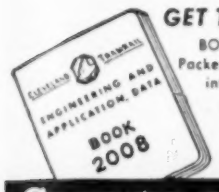
benchmaster MANUFACTURING COMPANY 5952 WEST PICO BOULEVARD LOS ANGELES 6, CALIFORNIA

"WORLD'S LARGEST PRODUCER OF SMALL PUNCH PRESSES"

For more details circle NED-2481 on enclosed inquiry slip

Speeds STONE ACROSS RIVER Increases STORAGE CAPACITY

Mud, rainstorms or deep snow do not hamper the transportation of crushed stone across a river to the storage area with this cab-operated system. This type equipment provides efficient year-round handling of sand, gravel, coal, etc. and enables high piling, thereby greatly increasing storage yard capacity.



GET THIS BOOK! BOOK No. 2008 Packed with valuable information...

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6607 East 285th St. Wickliffe, Ohio

CLEVELAND TRAMRAIL

For more details circle NED-2482 on enclosed inquiry slip

Two sets of double-break contacts—*isolated from each other*—no carry-over from one to the other by an arc.

Coin-silver contacts are used on these new electrical interlocks. With two movable contact bridges (instead of one previously used) and *each isolated from the other*, normally-closed circuits *cannot* be *carried over* by an arc to *normally-open* circuits or vice versa. *Safer electrical interlocks*—a good reason for specifying EC&M Magnetic Control.

WRITE FOR BULLETIN 1145

THE ELECTRIC CONTROLLER & MFG. CO.
2698 EAST 79TH STREET • CLEVELAND 4, OHIO

For more details circle NED-2483 on enclosed inquiry slip

Kester Solder

Kester Flux-Core Solders are made only from newly mined grade A tin and virgin lead. Fluxes are chemically and scientifically correct.

Eliminates Rejects

Rejects are eliminated when the correct solder for the job is used. Kester makes over 100,000 different types and sizes of Flux-Core Solder.

Faster

Using Kester "Speed" Solders will increase the output of your assembly lines.

KESTER SOLDER COMPANY
4201 Wrightwood Avenue
Chicago 39, Ill.
Newark, N. J. Brantford, Can.

KESTER SOLDER

SEND FOR FREE MANUAL: "SOLDER AND SOLDERING TECHNIQUE"

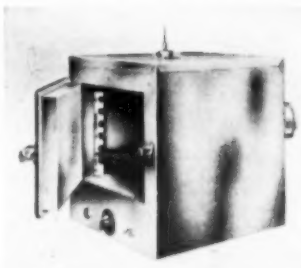
For more details circle NED-2484 on enclosed inquiry slip

AUTOMATIC COIL CRADLE is easily and quickly loaded

This model ACCI-640 automatic coil cradle can accommodate material up to 6 in. wide, 40 in. OD and 1000 lb in weight. In loading coil, wooden core is inserted inside coil, support rod is inserted in hole of core and entire assembly rolled into cradle where it is raised from floor with handwheel. Cradle is equipped with hardened and ground feed rolls, mercury switch and 220/440-v three-phase 60-cycle motor. Switch control provides loose loop of material between cradle and fabricating machine and reduces strain on feed unit with which machine can be equipped. Made by **U. S. Tool Co.**, Springdale Ave. & N. 18th St., East Orange, N. J.

For more details circle NED-2485 on enclosed inquiry slip

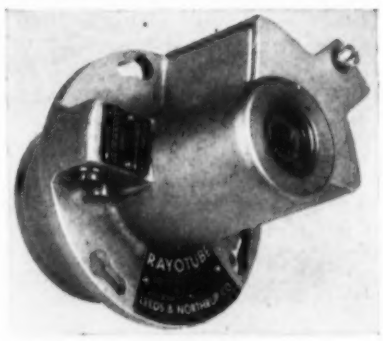
FORCED DRAFT OVEN heat differential held within 1° C



Heated air is agitated and channeled in uniform pattern throughout Hotpack Economy oven so that heavy masses or overloading will not cause hot air pockets. Blower located in rear wall of oven circulates air horizontally across shelves to front, and it returns along side walls. System distributes heated air uniformly and prevents loss of temperature at door. Oven has double walls of polished stainless steel with 2-in. glass wool insulation. Interior working chamber is 13 in. wide x 12 in. deep x 12 in. high. Unit operates on 115 v ac and consumes 1200 w. Made by **Electric Hotpack Co.**, 5063 Cottman Ave., Philadelphia 35, Pa.

For more details circle NED-2486 on enclosed inquiry slip

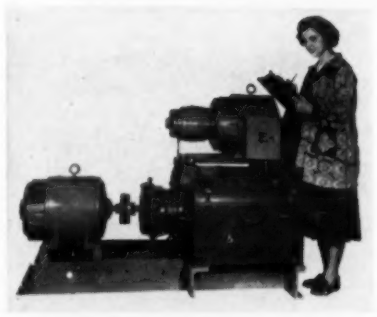
THERMAL DETECTOR features quick pyrometer sighting



Designed to work with all Micromax and Speedomax Rayotube instruments, this improved Rayotube radiation pyrometer detector is applicable to such equipment as slab furnaces, soaking pits, open-hearths and ceramic kilns. Quick sighting optical system allows user to select desired target and then check sharply defined area which instrument sees. Hermetically sealed construction at lens, window and leadwires keeps out dust and gases and promotes stability of operation. Unit requires no protection against ambient temperatures unless they exceed 350° F. Made by **Leeds & Northrup Co.**, 4934 Stenton Ave., Philadelphia 44, Pa.

For more details circle NED-2487 on enclosed inquiry slip

MOTOR GENERATOR SET delivers 1-kva three-phase power



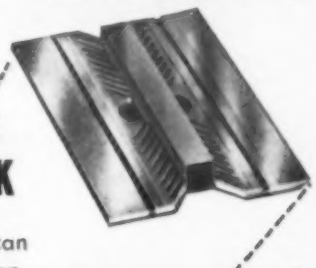
Powered by 5-hp 1800-rpm 220-v 60-cycle synchronous motor which drives separately excited alternator at infinitely variable speeds between 375 and 3750 rpm, this motor generator set can deliver its rated energy at any frequency from 50 to 500 cycles. Power output from no load to full load varies less than 10 per cent, and output is from 19.9 to 1.99 amp at 29 to 290 v, respectively. Motor, alternator and exciter are semienclosed and are designed for temperature rise of 75° F above ambient temperatures. Features include permanently lubricated ball bearings and chain drive from motor to speed changer with direct drives from motor to exciter and speed changer to alternator. Made by **Electric Specialty Co.**, 174 South St., Stamford, Conn.

For more details circle NED-2488 on enclosed inquiry slip

you can HOLD ANY METAL

OR NON-MAGNETIC MATERIAL

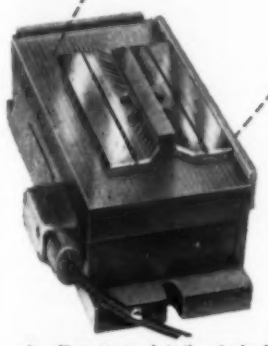
with your present MAGNETIC CHUCK



Now, with *Magna-Vise*, you can secure the time-saving advantages of magnetic chucking for a wide range of rigid materials. Saves time, cuts costs on ordinarily difficult-to-hold jobs. Ideal for tool room or production line . . .

Magna-Vise*

HOLDS THESE MATERIALS
Aluminum, Copper, Brass, Fibre, Stainless steel, Plastic, Glass, Magnesium, Chrome, tool steel
and many others



Get all the facts and you too will want Magna-Vise. Write today to Dept. ND-40.

Find out about the *extra holding power* of Magna-Lock Chucks.

Magna-Lock *Patented

Hanchett MAGNA-LOCK CORPORATION
Magnetic Chucks and Devices
BIG RAPIDS • MICHIGAN, U. S. A.

For more details circle NED-2489 on enclosed inquiry slip

Hanna Valves

...FOR EVERY CONTROL PROBLEM

¼" UNITITE

For light piping and tubing . . . control air, oil or water pressures up to 500 psi.

UNITITE

3-Way or 4-Way valves . . . quick-acting, packless . . . for pressures to 250 psi, in three mounting styles.

PILOT VALVES

3-Way . . . for direct control of small cylinders, automatic control of large cylinders as pilot for "Mastair."

FOOT OPERATED

Either single or double pedal . . . for pressures to 250 psi . . . provides quick, effortless control.

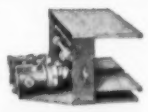
SOLENOID

New 4-Way valve . . . small, compact, low current consumption . . . adaptable to straight line piping.

"MASTAIR"

Balanced spool type . . . controlled by one 4-Way or two 3-Way pilot valves . . . pipe connected to bottom or sides.

FOOT PILOT VALVES



4-Way . . . for hand-free control of small cylinders, automatic control of large cylinders — through "Mastair" Valve.

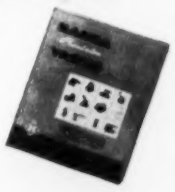
SPEED CONTROL

Regulates inflow and outflow of either air or oil independently to and from one side of piston—for air or hydraulic cylinders.

You are assured of long, trouble-free service with Hanna Valves, known throughout industry for their practical design and precision construction. Regardless of your control problem, get complete information on Hanna valves. Our new catalog will give you full details.

Send for NEW CATALOG 251

It gives full information on Hanna's complete Valve line. Write for your copy today.



Hanna Engineering Works
HYDRAULIC AND PNEUMATIC EQUIPMENT . . . CYLINDERS . . . VALVES . . . RIVETERS
1765 Elston Avenue, Chicago 22, Illinois

For more details circle NED-2490 on enclosed inquiry slip

THE **FLORLINE** MARKING MACHINE

Makes Safety & Parking Lines At Walking Speed!

Often pays for itself on the first job! 1 man alone can do the floor marking in 1 day that previously took an entire crew.

- Makes curved, straight, continuous or skip lines . . . 2, 3, or 4 inches wide with interchangeable carriages.
- Holds 1½ gals. paint, lacquer, whitewash . . . cannot spill.
- No motor, compressor or attachments.
- One man, one hand operation.
- Portable, efficient, speedy.
- Operates on gravity feed.
- Easy to clean and store.

$89.50
F.O.B. Detroit

Fully Guaranteed.

H. C. SWEET CO.

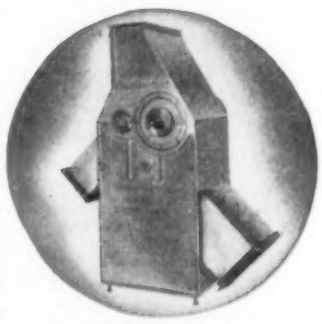
12083 Woodbine Ave. Dept. CH-1 Detroit 28, Michigan

▲ For more details circle **NED-2491** on enclosed inquiry slip ▲

NEW MAGNET DEVELOPMENTS by ERIEZ

MINUTE IRON REMOVED AUTOMATICALLY FROM EXTREMELY FINE DRY POWDERS

THE new Eriez Non-Electric Micro-Magnetic Separator automatically removes iron particles from fine, cohesive dry powders. These particles range in size from 16 mesh down to tiny 400 mesh; the parent mass can be almost as small.



Eriez Micro-Magnetic Separator

Recent tests with a cohesive aluminum oxide powder (240 mesh) showed 99.25% of the tramp iron removed at a flow of 16.6 cu. ft. per hour. At double the flow the efficiency was still over 98%.

Operating costs are very low because the magnetic separation is effected by powerful permanent magnets, the power of which lasts indefinitely. The unit is complete in itself . . . ready for immediate installation and operation. Available in 12", 18" and 24" inlet widths.

For more data on the Micro-Magnetic Separator, ask for Bulletin 554. For help with any separation problem, see Eriez.

Eriez Manufacturing Company, 59 East 12th Street, Erie, Pa.

ERIEZ ERIEZ ERIEZ ERIEZ ERIEZ

▲ For more details circle **NED-2492** on enclosed inquiry slip ▲

NOW—ON SALE AT HANDY & HARMAN DEALERS—EVERYWHERE

in handy 5-ounce packets

Now you can get this versatile, fast-acting low-temperature silver brazing alloy in convenient, sturdy 6½" square packets. Just the thing for—small shops—plumbers—refrigeration, electrical and other service men—maintenance and repair crews etc. Also for all shops that make ferrous and non-ferrous metal products for silver alloy brazing trial work, tool repairs, etc. Each package contains a 5-ounce coil of 1/16" EASY-FLO 45 wire (approx. 330 lineal inches)—also torch brazing instructions and a "Quick Facts" folder giving full details about EASY-FLO 45.

WRITE TODAY FOR OUR LIST OF DEALERS

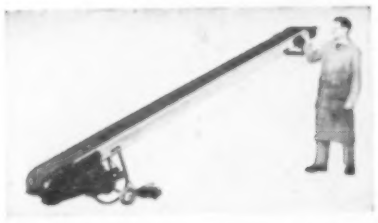
and order a supply of packets from the nearest one.

HANDY & HARMAN 82 Fulton St., New York 7, N. Y.

Agents in Principal Cities. In Canada: HANDY & HARMAN of Canada, Ltd., Toronto

▲ For more details circle **NED-2493** on enclosed inquiry slip ▲

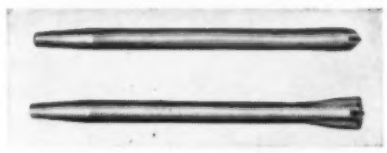
POWER BELT CONVEYOR operates at angles up to 40 degrees



Furnished in 10 and 16-in. belt widths and five standard lengths from 11 to 21 ft, lightweight Stevedore, Jr. aluminum power booster and stacker can be rolled into position easily. Box channel slider bed is formed of heat treated aluminum alloy with steel trussing for added rigidity on largest models. Maximum operating angle depends upon belt surfacing and materials conveyed. Two-way belt travel permits use in both loading and unloading operations. Belt incline is easily adjusted by lifting discharge end of unit and setting it on truck bed or loading dock. Conveyor can be supplied with either cushion rubber or pneumatic tire wheels. Made by **Rapids-Standard Co.,** Dept. ASJ, 342 Rapistan Bldg., Grand Rapids 2, Mich.

▲ For more details circle **NED-2494** on enclosed inquiry slip ▲

CARBIDE INSERT DRILLS for electric and pneumatic hammers

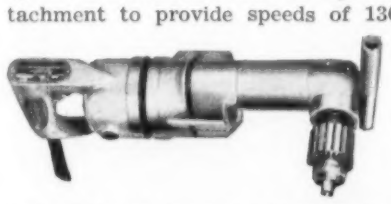


These tungsten-carbide insert drills are made in two types and supplied with tapered shanks to fit all standard chuck wrenches in sizes ranging from ½-in. bit diameter and 9 in. long up to 1½-in. bit diameter and 1 ft long. First type is four-point star drill for drilling holes in all nonmetallic construction materials such as slate, concrete, tile, brick and stone to install brackets and expansion bolts. Second type is chisel drill for drilling materials listed above as well as for inletting and scarifying. They will bore through light reinforcing rod when used with electric or pneumatic hammers. Drills with 1¼ to 1½-in. diameters can be furnished with straight shanks to fit directly into chuck end of hammer. Made by **Rock Bit Sales & Service Co.,** 2520 E. Cumberland St., Philadelphia 25, Pa.

▲ For more details circle **NED-2495** on enclosed inquiry slip ▲

ELECTRIC DRILL has right-angle drive attachment

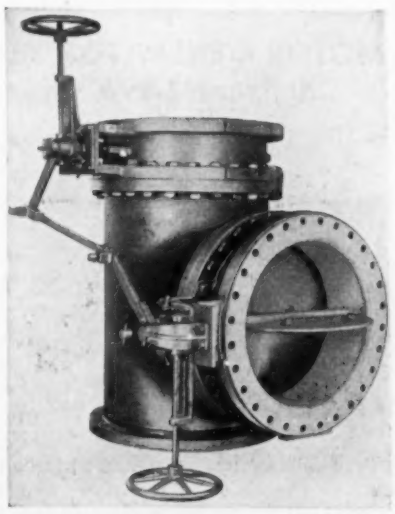
Compactly designed and weighing 8 lb, this tool combines ¼-in. electric drill and Tu-Speed right-angle drive attachment to provide speeds of 1300 rpm for polishing; 3000 rpm for light sanding and feather edging; and 1300, 2000 and 3000 rpm for drilling. Drill is powered by ⅓-hp 115-v universal motor. Motors for special voltages can be obtained also. Addition of right-angle drive permits tool to be used in close or obstructed places. Chuck is interchangeable and can be detached from drill and inserted on adapter when right-angle drive is used. Drill is encased in lightweight aluminum housing with turbine baffle fan providing controlled ventilation throughout. Made by **Milwaukee Electric Tool Corp.,** 5328 W. State St., Milwaukee 8, Wis.



▲ For more details circle **NED-2496** on enclosed inquiry slip ▲

RUBBER SEATED VALVES withstand temperatures to 275° F

Capable of being operated in unison for positive shutoff, these two No. 733 30-in. heavy duty rubber seated valves are attached to 30-in. American Standard tee and provided with handwheel controls with declutching mechanisms and outboard gooseneck bearings. Valves are drip-tight with water at 100 psig and air-bubble-tight at 80 psig at temperatures as high as 275° F and as low as −40° F. Because of 12½-degree angle of closure, rubber yields both radially and longitudinally around shaft bosses and periphery of valve to insure proper shutoff under pressure. Rubber seats can be replaced. Valves are recommended for such applications as mixing and reversing flow of condenser water. Made by **R-S Products Corp.,** 4500 Germantown Ave., Wayne Junction, Philadelphia 44, Pa.



▲ For more details circle **NED-2497** on enclosed inquiry slip ▲

FIBREX® RED WHEELS

cutting! ideal for weld grinding!

Fibrex Wheels *actually cut* the excess weld metal away — a much faster operation than grinding it down — and then go on to smooth and finish up the work — all with the *same wheel!*

Put Fibrex to work on your weld grinding and metal finishing jobs — for extraordinary performance and cost-cutting efficiency. Send for Bulletin ESA 186.

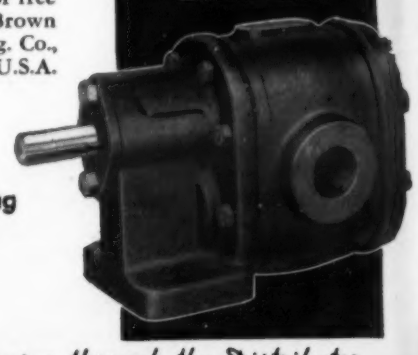
SIMONDS ABRASIVE CO.

SIMONDS ABRASIVE CO., 5514 TACONY ST., PHILA. 37, PA.
DISTRIBUTORS IN ALL PRINCIPAL CITIES

▲ For more details circle **NED-2498** on enclosed inquiry slip ▲

Rotary Geared Pumps for Hydraulic Service

Equipped with helical gears and roller bearings, these Brown & Sharpe Rotary Geared Pumps offer smoother, more efficient operation in hydraulic systems. Available in two sizes: No. 53 has a capacity of 4 to 23.2 gpm, and No. 55 from 9 to 34.1 gpm. They operate under pressures up to 200 lbs. per. sq. in. Run in one direction only, either clockwise or counterclockwise. Pumps have positive mechanical seal. Write for free pump catalog. Brown & Sharpe Mfg. Co., Providence 1, R.I., U.S.A.



***Quiet pumping**

***Smooth, continuous flow**

We urge buying through the Distributor

BROWN & SHARPE BS

▲ For more details circle **NED-2499** on enclosed inquiry slip ▲

HAVE COMPRESSED AIR with the Plug-in Convenience of Electricity

You can have air wherever you want it, at a very low initial cost, with Schrader Quick Acting Couplers.

Rugged, accurately machined couplers, made in two principal types, standard and Hevi-Duty. Both types consist of two parts —check unit which screws into or onto a pipe fitting or pipe, an adapter which is fitted to the hose.

Check units: male or female threaded. Adapters: male or female threaded or furnished with a serrated shank.

Hevi-Duty Check Units are swivel type to prevent kinking of hose. Smaller standard couplers supplied in either swivel or non-swivel types.

PUSH to connect. Starts air flowing at once

TWIST slightly and **PULL** to disconnect. Shuts off air at once.

Write for information and free literature on Schrader Air Couplers.
For data on hundreds of other Schrader Products . . . Air Line Fittings, Air Hose, Press Controls, Air Ejection Sets, etc., ask for complete 72-Page catalog.

A. SCHRADER'S SON
478 Vanderbilt Avenue
BROOKLYN 17, NEW YORK, Dept. ND-12
Division of Scovill Manufacturing Company, Incorporated

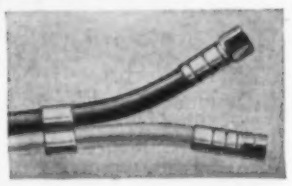
Schrader PRODUCTS CONTROL THE AIR

▲ For more details circle **NED-2500** on enclosed inquiry slip ▲

TWO HOSES...ONE LINE!

TWIN-WELD HOSE SPEEDS WELDING STOPS TANGLING

Patented Twin-Weld® combines a green oxygen line and a red acetylene line molded into one compact unit. No more dangerous, tangled separate hoses . . . the operator has one neat flexible, non-kinking line that makes his job safer, faster, more efficient. Especially useful in close-quarter work. Call your Hewitt Rubber distributor, or write Hewitt Rubber Division, 240 Kensington Avenue, Buffalo 5, N. Y.



HEWITT-ROBINS INCORPORATED

For more details circle NED-2501 on enclosed inquiry slip

NOW for your complete protection

FROM THE WET • GREASE • OILS • ORDINARY ACIDS

TOWER'S FISH BRAND NEOPRENE

TOWER'S protective garments prevent time losses by affording maximum protection from the wet, dampness, spraying and foul weather. TOWER'S new NEOPRENE coated garments give utmost protection by also resisting grease, oil and ordinary acids. There is a TOWER protective garment especially adaptable for every type of industrial activity. We will be glad to recommend the garment which best meets your individual requirements.

For folder of styles and detailed information write Department SF.

OILED RUBBER

TOWER'S FISH BRAND

A. J. TOWER CO.

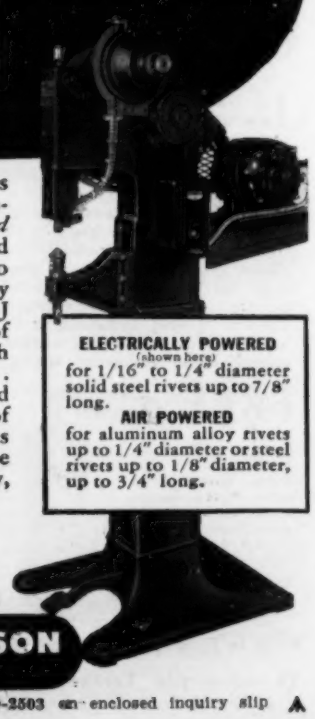
24 SIMMONS ST., BOSTON, MASS.

TOWER'S ARROW BRAND

For more details circle NED-2502 on enclosed inquiry slip

Top Speed with **T-J RIVITORS**

. . . Automatically Feeds and Sets Solid Rivets!



On countless assembly jobs today—T-J RIVITORS are doing the rivet setting *faster and better!* T-J feeds and sets solid rivets *automatically* . . . no manual rivet handling . . . easy for women operators. T-J produces a solid rivet joint of 10% to 15% greater strength—a completely filled hole . . . no flashing . . . a neat, balanced head. Handles many types of rivets . . . saves labor . . . cuts costs! Write for bulletin. The Tomkins-Johnson Company, Jackson, Michigan.

ELECTRICALLY POWERED (shown here) for 1/16" to 1/4" diameter solid steel rivets up to 7/8" long.

AIR POWERED for aluminum alloy rivets up to 1/4" diameter or steel rivets up to 1/8" diameter, up to 3/4" long.

T-J ..FOR TOUGH JOBS

TOMKINS-JOHNSON RIVITORS

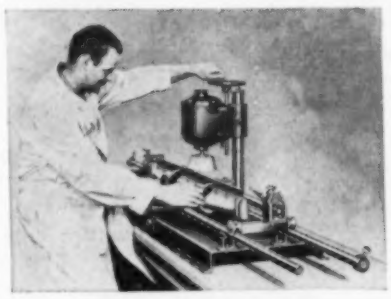
For more details circle NED-2503 on enclosed inquiry slip

HUMIDITY-TEMPERATURE GAGE
accurate unit is self-contained

Direct-reading Hygrodial instrument indicates at glance relative humidity and temperature of air to which it is exposed. Graduated into equal divisions from 0 to 100 per cent, 2½-in. humidity scale is clearly marked for ease of reading. Lens-front type thermometer is red-liquid filled and is accurate within 1° at 70° F. Slots on each side and bottom afford maximum ventilation for quick sensing by motivating element. Instrument has rubber feet for table use as well as provision for wall mounting. Made by Bendix Aviation Corp., distributed by **Abbeon Supply Co.**, 5811 41st Dr., Woodside, N. Y.

For more details circle NED-2504 on enclosed inquiry slip

BENCH GRINDER
grinds straight edge tools or knife



Built to accommodate mower bed knives of any length or special construction, model 50 Ideal bench grinder employs rotating motor, grinding wheel and carriage to grind both faces without necessity of removing blade from clamps. Blade is aligned by vertical and horizontal adjustments at either end of clamping bar. Grinding wheels is then lowered into work by means of feed wheel at top. Motor and grinding wheel can be rotated 360 degrees and locked into most accurate position. When one face has been ground, clamping bar is rotated in carriage and other face brought quickly into position for grinding. Dust-sealed 1/3-hp high speed motor turns 5-in. tapered cup grinding wheel. Capable of grinding almost any straight edge tool or knife, machine can be adapted quickly to handle specialized grinding jobs. Made by **Fate-Root-Heath Co.**, Dept. D-6, Plymouth, O.

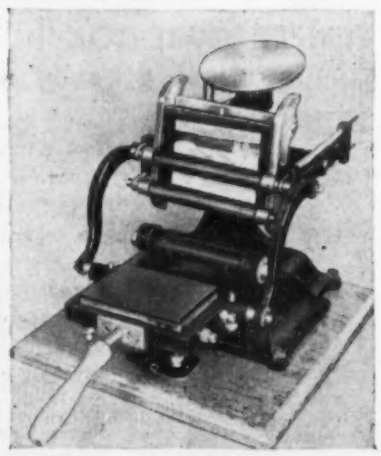
For more details circle NED-2505 on enclosed inquiry slip

OSCILLATING SANDER
has metal clamp for holding paper

Redesigned model 438 Skil oscillating sander utilizes simple metal clamp that fits into grooves at both ends of sanding head to hold paper securely over vibrating head. Older models can be adapted to use this clamp. Other improvements include dampner that practically eliminates vibration, improved rear handle with thumb operated switch, and motor housing designed for efficient cooling. Compound motion of this unit produces cutting against grain at leading edge of sander and sands with grain at rear. Sander is supplied with 4½ x 5½-in. paper for application with cement and 4½ x 6½-in. paper for use with metal clamp. Made by **Skilsaw, Inc.**, 5027 Elston Ave., Chicago 30, Ill.

For more details circle NED-2506 on enclosed inquiry slip

OFFSET PRINTING MACHINE
imprints on glass, plastic or metal



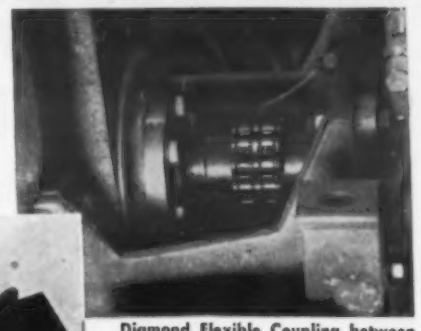
Illustrations, decorations, trade marks or advertising matter can be printed in any color on almost any nonporous round, flat, concave or convex surface by this hand-operated printing machine. Using type, engravings or electros, machine will print area up to 3 x 4½ in. at rate of 500 to 800 pieces per hour. By pulling hand lever forward and returning to position, type is automatically inked and impression made on offset transfer pad. This pad is flexible cushion with smooth surface. Impression is picked up from transfer pad by pressing item to be imprinted against pad or by rolling item over pad by hand. All ink colors are available as well as variety of inks, rollers, type and parts for special purposes. Made by **Apex Machine Mfg. Corp.**, 53 E. Tenth St., New York 3, N. Y.

For more details circle NED-2507 on enclosed inquiry slip

LONGER SERVICE ON TOUGH JOBS

TRADE MARK

Model H. A. "Payloader" is fast, rugged. Handles any bulk material including scrap iron, gravel, cement.



Diamond Flexible Coupling between crankshaft of 29 H.P. engine at 1800 R.P.M. and Vickers hydraulic pump assures long life, low cost, maintenance-free performance.

Diamond Flexible Couplings

On the husky Hough line of "Payloaders," Diamond Flexible Couplings have demonstrated their ability to deliver longer and more reliable service under the toughest kind of operating conditions.

Being all steel,—two sprockets and a double strand of high-strength Diamond Roller Chain,—they are not affected by atmospheric conditions or temperature changes. Made in sizes from .6 H.P. to 680 H.P. with new revolving casings which provide for more complete lubrication and still longer life. DIAMOND CHAIN COMPANY, Inc., Dept. 457, 402 Kentucky Avenue, Indianapolis 7, Indiana.

Offices and Distributors in all principal cities

Refer to the classified section of your local telephone directory under the heading CHAINS or CHAINS-ROLLER

New Bulletin No. 19 gives complete data on Couplings and new Casings. Your copy sent on request.

For more details circle NED-2508 on enclosed inquiry slip

GOOD "SHOPKEEPING" PAYS DIVIDENDS IN INCREASED PRODUCTION . . . ELIMINATES HEALTH HAZARDS . . . IMPROVES WORKING CONDITIONS . . . BOOSTS EMPLOYEE MORALE. GOOD "SHOPKEEPING" REQUIRES MODERN CLEANING EQUIPMENT . . . TORNADO* CLEANERS YEARS AHEAD . . .

TORNADO* Heavy Duty Industrial Vacuum Cleaners have been proven by 19 years of constant use in industry for floor and overhead cleaning. Users report substantial time and labor saving with better results. One-stroke positive suction gives instant, thorough cleaning first time over.

Picks up Water, Machine Oil, Moisture, Dirt and Grime without adjustments. Operator moves right along picking up all **wet or dry** substances in stride. Leaves a clean, dry, **safe** surface.

Conversion Features Increase Usefulness. Power unit becomes a handy, powerful, portable blower. Shoots a concentrated stream of clean, dry air to blow abrasive dirt out of motors, machinery, gears, shafting, etc. Same power unit is used as pack-carried vacuum cleaner in congested plant areas or other hard to reach places.

Gives Complete Good "Shopkeeping" Service. Easy to operate. Sturdy in construction. Light in weight, yet extremely powerful.

*Trade Mark Reg. U. S. Pat. Off.

***Bulletin 592 gives complete information.* WRITE FOR IT!**

BREUER ELECTRIC MFG. CO.

5098 Ravenswood Ave.
Chicago 40
Illinois

INDUSTRY

For more details circle NED-2509 on enclosed inquiry slip

HYDRECO GEAR PUMPS

. . . are designed to take abuse

HYDRECO Oil-Hydraulic Gear Pumps have long been known for their ability to take real abuse and more. That's one reason HYDRECO pumps are being specified by more and more equipment manufacturers. Extra heavy housings, large area roller bearings, precision manufacturing keep HYDRECO pumps operating under even the worst conditions of shock loads, excessive speeds and poor and dirty lubricants.

Write for catalog and full information.

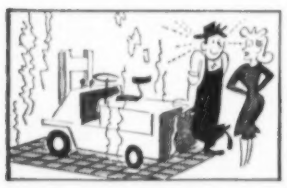
HYDRAULIC EQUIPMENT COMPANY
1108 EAST 222nd STREET • CLEVELAND 17, OHIO
HYDRECO HYDRAULIC CONTROL DEVICES
PUMPS • CYLINDERS • VALVES

For more details circle NED-2511 on enclosed inquiry slip

B.F. Goodrich

T&W TIRE AND WHEEL ANALYSIS PLAN

helps materials handling men cut cost corners



HEAT A FACTOR IN YOUR PLANT? BFG "Oil-Proof" compound is the answer—highly heat-resistant!

No problem is too small . . . nor too large for the T & W analysis man. Ask him in, even though your problems are little ones.

Here's how you can make big savings in tire and wheel costs, equipment maintenance and floor maintenance. An experienced tire and wheel man will survey your operation. He will study loads, hauls, handling equipment, floors and hauling surfaces, and discuss any special problems you may have.

On completion of this survey the BFG man, without charge or obligation on your part, will submit recommendations as to the best type and size tires and wheels for your particular service with information on the longest-wearing compounds and on retreading. He will also provide suggestions on tire care and maintenance.

Send in the coupon below and start the wheels rolling for a B. F. Goodrich industrial tire and wheel expert to visit your plant and make your cost-cutting T & W analysis. You'll find the BFG man is *impartial.* He has no "axe to grind" for any one "type" of tire . . . his company makes and sells *ALL* types in *ALL* sizes!

Dealerships Available In a Few Localities—Write B. F. Goodrich, Akron

The B. F. Goodrich Co.
Department TW-39
Akron, Ohio
Please give me additional information on your new Tire and Wheel Analysis plan.
Name_____
Title_____
Company_____
City_____ State_____

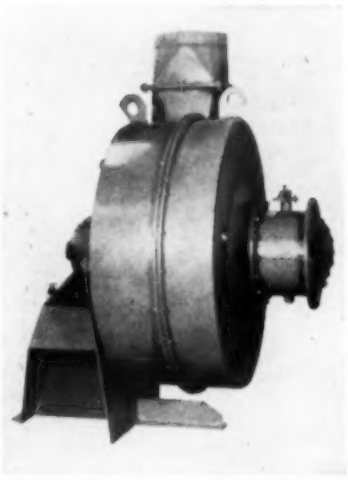
For more details circle NED-2512 on enclosed inquiry slip

MALLEABLE MACHINE HANDLES made in three styles and many sizes

Crank, straight and offset styles of malleable machine handles are available in various sizes ranging from 4 to 18 in. They are sufficiently sturdy to withstand hard usage and will not break if accidentally struck sharp blow. They are free-machining and ductile enough to permit user to make additional bends when necessary to suit his requirements. Made by **Reid Tool Supply Co.,** 711 Baker St., Muskegon Heights, Mich.

For more details circle NED-2513 on enclosed inquiry slip

LARGE VOLUME BLOWERS are of single or two-stage design



Of large volume low pressure type, 300 series blowers can be obtained in direct-connected models or with V-belts transmitting power from motor to blower through jackshaft. Four-ounce pressure blowers deliver 4000 and 4700 cfm with 7½ and 10-hp 1750-rpm motors; 8-oz units give 2480, 4250 and 4800 cfm with 10, 15 and 20-hp 1750-rpm motors; and two blowers with 50 and 60-hp 3600-rpm motors provide 6000 and 7560 cfm respectively. Cases and bases are fabricated of steel plate, and impellers are dynamically balanced aluminum. Made by **North American Mfg. Co.,** 4453 E. 71st St., Cleveland 5, O.

For more details circle NED-2514 on enclosed inquiry slip

PORTABLE STEAM GENERATOR electric type supplies 320°F steam for cleaning and sterilizing usage

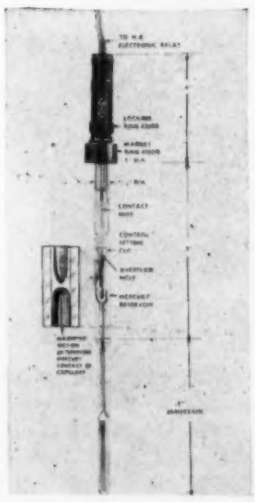
Through valve adjustment, this portable electric steam generator can deliver live steam up to 100 psig, hot water, steam and detergent solution, hot water and detergent solution, and cold water rinse. Recommended uses include industrial building maintenance, sterilizing freight cars and trucks before loading, degreasing motors and grain conditioning. Unit generates steam with three electrodes completely immersed in water, and automatic controls keep boiler at preset pressure that does not vary more than 5 lb.

All boilers are inspected and stamped by ASME, and all electrical equipment is listed by Underwriters' Laboratories. Safety devices include automatic low-water cutoff, safety pop-off valve and visible water level gage. Since unit is heated electrically, no flue is required, and it can be used in enclosed room or shop.

Machine is mounted on steel wheels with rubber tires and has steel cabinet enclosing entire unit, doors at either end for quick access to switches and valves, and sliding panel in side for major adjustments. Equipment includes 1/3-hp motor, detergent tank and 25-ft steam hose with nozzle and insulated handle. Generator can be obtained also as stationary model, if desired. Made by **Wolf Co.,** Chambersburg, Pa.

For more details circle NED-2515 on enclosed inquiry slip

TEMPERATURE CONTROL is adjusted easily over wide range



Once set within 10° F of control temperature, H-B Quick-Set Thermo-regulator can be further adjusted to within 0.01° F of desired setting and even closer under favorable conditions by merely turning ring knob. Unit fits into medium to be controlled and through H-B electronic relay can handle control circuit of up to 30 amp at 110 v ac. One model covers range from approximately 30° to 600° F or higher, while other model has range from −38° to 50° F. Both units are 14 in. long, and largest glass cylinder has 9/16-in. diameter. They are hydrogen filled under pressure and are intended for 5-in. submergence. Made by **H-B Instrument Co.,** Dept. T-27, 2633 Trenton Ave., Philadelphia 25, Pa.

For more details circle NED-2516 on enclosed inquiry slip

Power YOUR PRODUCT WITH . . .

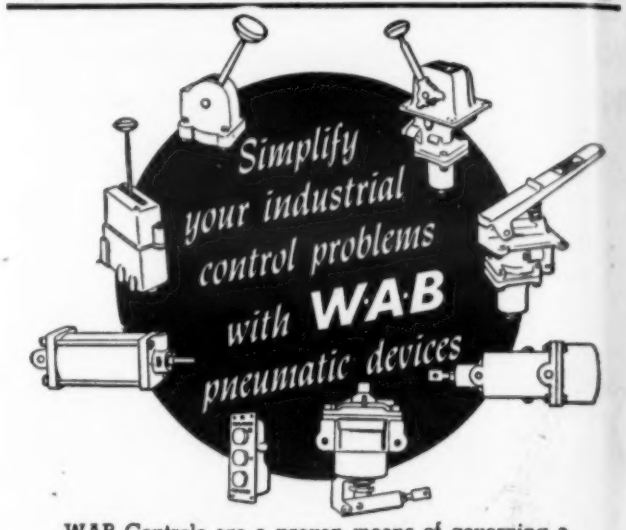
BARCOL FRACTIONAL • HORSEPOWER MOTORS

- UNIDIRECTIONAL
- SYNCHRONOUS OR REVERSIBLE
- WITH OR WITHOUT GEAR REDUCTION
- UP TO 1/30 H.P.
- ENGINEERING SERVICE

for FANS, HAIR DRYERS, SPOT HEATERS, OIL BURNERS, DISPLAY TABLES, VENTILATORS, PROJECTORS, TOYS, PUMPS, VAPORIZERS, VENDING MACHINES, FACSIMILE RECORDERS

BARBER-COLMAN COMPANY ROCKFORD ILLINOIS

For more details circle NED-2517 on enclosed inquiry slip



WAB Controls are a proven means of governing a wide variety of functions, from a simple "push-pull" operation to precise positioning. Successfully serving on production machines, hoists, cranes, excavating equipment, oil drilling rigs, boats, etc. Illustrations show only a few of the many devices available. Ask for Bulletin 9481-1 for full details.

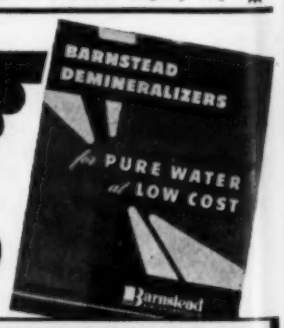
Westinghouse Air Brake Co.
Industrial Division: Wilmerding, Pa.

DISTRIBUTORS THROUGHOUT THE UNITED STATES
CONSULT YOUR CLASSIFIED DIRECTORY

For more details circle NED-2518 on enclosed inquiry slip

THIS CATALOG GIVES THE ANSWERS

DISTILLED WATER?



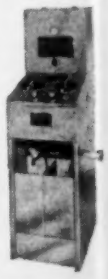
DEMINERALIZED WATER?

In hundreds of manufacturing processes, where complete purity is needed, Barnstead Stills provide the highest-quality, lowest-cost, chemically pure, sterile water from ½ to 1000 gallons per hour. With over 100 different models to choose from, Barnstead can provide the exact still to fit your particular needs. For Barnstead Laboratory and Industrial stills are the proven standard of the scientific and industrial world.

FREE

Catalog #123 gives both sides of the Pure Water Picture. Since Barnstead makes both stills and demineralizers, you'll find this catalog complete, authoritative, unbiased. Write Today!

Where modern manufacturing processes require only high-test mineral-free water, Barnstead Demineralizers are the best producers . . . 5c per 1000 gallons with a minimum of supervision and maintenance. Many new industries are turning to Barnstead Demineralized Water for greater production, fewer rejects and better quality control.



First in Pure Water since 1878 **Barnstead STILL & STERILIZER CO.**

16 Lanesville Terrace, Forest Hills, Boston 31, Mass.

For more details circle NED-2519 on enclosed inquiry slip

Speed is Easy to Measure

...with the NEW

T21 Miniature Frahm Tachometer

It measures rpm or vpm merely by touch—by contact with the machine casing.

For portable service or for permanent mounting, this practical instrument measures speed through use of the resonant-reed principle. The T21 cannot be injured by over-speeding, requires no maintenance, and imposes no load on machines under test. Scales range between 1,000 and 12,000 rpm. Write for Bulletin 31-35-D.

JAMES G. BIDDLE CO.
Electrical & Scientific Instruments
1316 ARCH STREET, PHILADELPHIA 7, PA.

▲ For more details circle **NED-2520** on enclosed inquiry slip ▲

BIG VALUE IN A SMALL SWITCH

ARROW AH HART No. 6808

FOR SMALL MOTORS AND HEAVY LIGHTING LOADS

For controlling small motors (up to 2 HP) — for handling heavy lighting loads (up to 30A) — the 6808 is an old favorite with design and maintenance men. Small size and low cost make it ideal for a wide range of applications in which overload protection is not necessary. Cutaway shows these features: Bakelite arc snuffers increase breaking capacity • Kickoff release for positive, fast action • Long-lasting phosphor bronze switch blades • Heavy duty, wear-resisting, stationary contacts. 6808 is a 2 pole, 1 phase unit, rated 2 HP, 115-600V, AC or DC; 30A 250V, 20A 600V.

ARROW AH HART No. 7810 FOR USE WITH AC ONLY

The 7810 is a 3 pole, 3 phase unit, rated 2 HP, 110-600V AC; 30A 250V, 20A 600V AC. Silver, butt-type contacts give long life, accurate, positive slow-make and break action. Both models are available for surface- or flush-mounting; as explosionproof, dustproof or waterproof units. Both are no-fuse types; line is protected by normal fusing.

FOR LITERATURE, WRITE
6004 HAWTHORN STREET
HARTFORD 6, CONN.

CONTROLS and APPARATUS FOR *Outstanding* PERFORMANCE

ARROW AH HART

ARROW-HART THE ARROW-HART & HEGEMAN ELECTRIC COMPANY HARTFORD 6, CONN. U.S.A.

BRANCHES IN: Boston, Chicago, Cleveland, Cincinnati, Dallas, Denver, Detroit, Los Angeles, New York, Philadelphia, San Francisco, Syracuse.
IN CANADA: ARROW-HART & HEGEMAN (Canada) Ltd., Mt. Dennis, Toronto

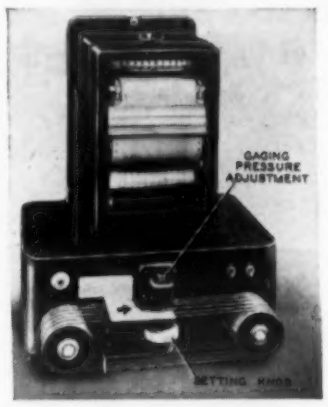
▲ For more details circle **NED-2521** on enclosed inquiry slip ▲

HIGH-SPEED TAPPING HEAD simplifies tapping of large holes

Capable of producing accurate thread depth repeatedly, Tap King high speed tapping head has ⅜ to 1-in. capacity in steel and 1⅛-in. capacity in softer materials. Incorporated are smooth powerful friction clutch, spline drive to tap holder spindle, ball and needle bearings, rigid lightweight Tru-Grip tap holder, and helical back gear reversing mechanism. Head is available with No. 3, 4 or 5 Morse taper shank and is made also in cover clamping model for extra rigidity, accuracy and long life. Made by **Procunier Safety Chuck Co.,** Dept. 27, 18 S. Clinton St., Chicago 6, Ill.

▲ For more details circle **NED-2522** on enclosed inquiry slip ▲

THICKNESS GAGING INSTRUMENT inspects continuous strip material



Cross section of continuous strip material such as Cellophane, vinyl plastic and thin papers is inspected by Micrograph comparator type instrument. After 2-in. wide piece is cut out across width of strip material, it is placed lengthwise on indexing feed mechanism of instrument which automatically indexes it, takes reading every ¼-in. and records thickness. Indexing mechanism is tied into chart drive of recorder on 1:1 ratio so that length of chart record is equivalent to width of material. Chart record can then be laid on continuous strip material across width of line to afford accurate production control graph of material thickness variations across width. Made by Pratt & Whitney Div., **Niles-Bement-Pond Co.,** 20 Charter Oak Blvd., West Hartford 1, Conn.

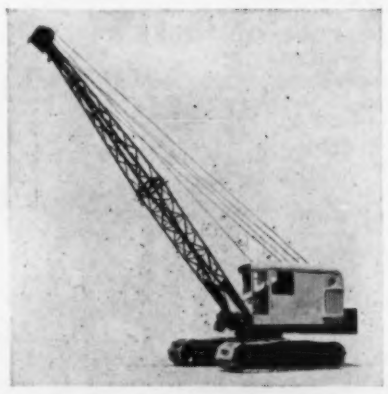
▲ For more details circle **NED-2523** on enclosed inquiry slip ▲

EJECTOR TOOL HOLDER designed for solid carbide inserts

Hard chrome plating of heads of improved line of ejector tool holders for solid carbide inserts has increased life of holder up to 500 per cent by eliminating chip erosion. New method of clamping gives controlled action and stress-free support of blade. Locking screw on top of holder permits fast insert interchange without removing unit from tool post, and wing nut on bottom eliminates need of wrench in locking adjusting screw. Other improvements include knockout hole for easy removal of insert and elimination of offsets and excessive overhangs. Made by **Super Tool Co.,** 21640 Hoover Rd., Detroit 13, Mich.

▲ For more details circle **NED-2524** on enclosed inquiry slip ▲

POWER SHOVEL-CRANE 1-yd model has hydraulic coupling



Twin-disk hydraulic coupling incorporated in Lorain-50 shovel-crane permits stopping machinery without stopping engine and provides means of absorbing digging stresses and strains before they are transferred into operating mechanism and cables. Standard power plant is Caterpillar 6-cylinder diesel engine equipped with separate electrically actuated gasoline starting engine. Waukesha 6-cylinder gasoline engine with hydraulic coupling is available as optional main power plant. Turntable rollers are mounted on Timken roller bearings of special design, in which roller itself serves as outer race for roller bearing. Wide swing clutches of floating anchor shoe type allow good band contact and pressure distribution. Complete line of interchangeable boom equipment is obtainable for use with this machine. Made by **Thew Shovel Co.,** Dept. NED, Lorain, O.

▲ For more details circle **NED-2525** on enclosed inquiry slip ▲

get the whole picture

here's a COMPLETE LINE of blind fasteners

Fit your fastening jobs exactly from Cherry Rivet Company's complete line of blind rivets and high-strength structural bolts.

CHERRY RIVET The standard blind rivet of industry. Meets requirements for Air Force and Navy Aircraft, and high quality industrial needs.

BLIND BOLT Large-diameter blind fastener for heavy sheet metal assembly jobs.

LOCK BOLT A high-strength structural non-blind fastener for use where shear and tension loads are high.

DRIVE PIN RIVET Installed with a hammer. Ideal where sheets are being installed against rigid framework.

UTILITY RIVET Low-cost straight-stem mechanical blind rivet manufactured to less critical quality control standards than regular Cherry Rivets. Ideal for low-cost, high-volume fastener requirements.

Cherry Rivet COMPANY
238 WINSTON STREET, LOS ANGELES 13, CALIF.

Write for details today

▲ For more details circle **NED-2526** on enclosed inquiry slip ▲

Yours for better bearing protection

—this new book about OIL SEALS

This new book tells the complete story of the Johns-Manville Clipper Seal—the oil seal that's precision moulded for accurate fit and maximum life.

It gives information on the various designs that are available for a wide range of sealing conditions...tells about Clipper Seals that overcome problems of electrolysis and corrosion... seals that can be used for dry sealing... or against acid fumes . . . seals designed for high temperatures . . . and for quick, easy installation where clearances are small.

If you have a sealing problem, there is a Johns-Manville Clipper Seal that can help you solve it! Send today for your copy of this new book. Address Johns-Manville, Box 290, New York 16, New York.

JM Johns-Manville CLIPPER SEALS

▲ For more details circle **NED-2527** on enclosed inquiry slip ▲

Lift Loads SAFELY with DROP FORGED BTC SAFETY HOOKS

Here's the new, safer way to handle heavy loads — BTC Drop Forged Safety Hooks. These sturdy hooks feature automatic mousing and a safety-tie lip hook that affords extra strength . . . prevents slings from slipping and hooks from snagging or straightening. BTC's mousing automatically engages when loads are applied; disengages when loads are released. Special shoulder and lip lock construction maintains load carrying capacity even if pin is sheared. Drop forged steel construction gives BTC Hooks maximum strength. Available in 5-ton or 10-ton sizes in either Eye Bridge or Shank Bridge — both sizes replace eight standard open hook sizes. For safer load handling, order BTC Drop Forged Safety Hooks from your supplier today.

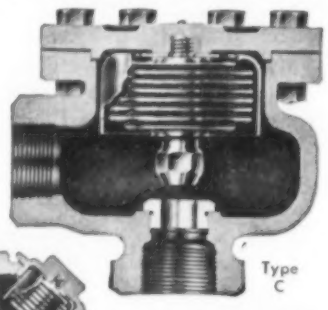
The Brewer-Titchener Corporation
Cortland, New York
Please send me bulletins describing the new BTC Drop Forged Safety Hooks.
Name.....
Company.....
Street..... City.....

▲ For more details circle **NED-2528** on enclosed inquiry slip ▲

Well-Known Processor

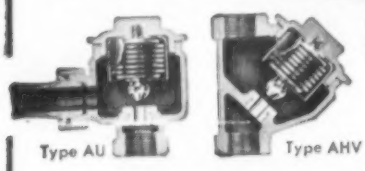
Puts 37% More Thru Cookers with Nicholson STEAM TRAPS

A leading drug manufacturer found that a recent Nicholson thermostatic trap installation, replacing a mechanical type, so cut kettle time that their production was increased 37%. Reasons for Nicholson's faster heat transfer: operate on lowest temperature differential; 2 to 6 times average drainage capacity; maximum air-venting.



5 Types for Every Plant Application

Process, Heat, Power. Sizes, ¼" to 2"; pressures to 225 lbs.



CATALOG 448 or see Sweet's

W. H. NICHOLSON & CO. 162 OREGON STREET WILKES-BARRE, PA.

Sales and Engineering Offices in All Principal Cities

▲ For more details circle NED-2531 on enclosed inquiry slip ▲

If you do or plan to, you should know about Bristol Series 500 Air-Operated Controllers for temperature, pressure, flow, liquid level, humidity and pH value.

Their many exclusive features will enable you to get better control results.

They are the product of over 60 years of experience in building and applying hundreds of thousands of recording and controlling instruments.

Write for our new Bulletin A120, giving complete information. THE BRISTOL COMPANY, 112 Bristol Road, Waterbury 20, Conn.

BRISTOL

Automatic Controlling, Recording and Telemetering Instruments

▲ For more details circle NED-2532 on enclosed inquiry slip ▲

A DUST-FREE PLANT

Good working conditions are important in the efficient operation of any plant—that is why dust hazards should be eliminated. There are many ways in which DRACCO Dust Control contributes to greater plant efficiency—equipment lasts longer and requires less maintenance and good working conditions attract better workers. In many cases valuables recovered make substantial savings. You may consult DRACCO Engineers and obtain their advice. They have over 35 years' experience in fume and dust control.

For Further Information Write

DRACCO CORPORATION

4053 E. 116th Street, Cleveland 5, Ohio New York Office: 130 West 42nd St.

PNEUMATIC CONVEYORS • DUST COLLECTORS

▲ For more details circle NED-2533 on enclosed inquiry slip ▲

PORTABLE PUMP rated output is 15,000 gph

Powered by 5-hp aircooled gasoline engine, this self-priming portable centrifugal pump has 28-ft suction lift and employs non-clogging impeller mounted directly on engine shaft. Engine has kickproof automatic-rewind starter, rainproof ignition system and automatic governor that controls its speed at all loads. Entire unit is lubricated by oil added to fuel; and for periods of long operation, three-way fuel valve permits use of separate fuel tank. Pump and engine are mounted on spring base that insures footing on all types of ground, and center balance adds to portability. Made by **McCulloch Motors Corp.**, Dept. NED, 6101 W. Century Blvd., Los Angeles 45, Calif.

▲ For more details circle NED-2534 on enclosed inquiry slip ▲

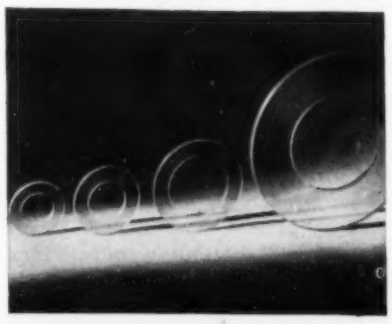
SMALL DIECASTING MACHINE has capacity of 1-lb of zinc alloy

Utilizing fast chill and high cycling speed on low cost small single impression dies, model M55 A/HF-1P diecasting machine makes possible average production of 500 to 700 shots per hour. Direct valving 'explodes' air into cylinder so that hot molten metal is shot into cavities before it has chance to cool. This results in small water-cooled sprue which solidifies instantly.

Die sizes up to 6 x 9-in. can be used. Small prefabricated die blanks are supplied with machine, and cavities can be machined directly into them. Smooth surface imparted to parts dispenses with need for most secondary operations and takes any painted or plated finish. Made by **DCMT Die Casting Machine Corp.**, Dept. 50, 164 Duane St., New York 13, N. Y.

▲ For more details circle NED-2535 on enclosed inquiry slip ▲

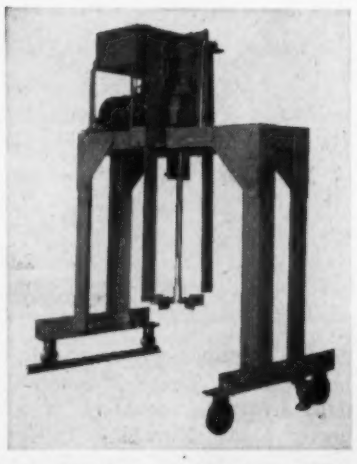
GLASS ORIFICE PLATES available in diameters up to 16 in.



Dimensional stability, corrosion resistance and close tolerance are features of Pyrex glass orifice plates. Both inside and outside dimensions are diamond-wheel ground, and sharp square edges can be maintained where desired. Plates are available in various thicknesses and in sizes up to 16-in. OD. Made by **Precision Thermometer & Instrument Co.**, 1426 Brandywine St., Philadelphia 30, Pa.

▲ For more details circle NED-2536 on enclosed inquiry slip ▲

HEAVY-DUTY AGITATOR serves whole row of tanks



Capable of being moved from one tank to another for batch mixing or blending, turbine type heavy-duty Lightnin Agitator will serve up to 40 tanks in any order desired. When connected to plant electrical supply, it is ready to operate since manufacturer supplies correct motor and impeller size for specific application. Impeller shaft and impeller are raised and lowered in tank hydraulically. To switch from one tank to another, operator merely sets two levers, releases floor lock and wheels unit to new position. Unit is supplied in capacities up to 4.5 hp at impeller and is fitted with two integral baffles that raise and lower with impeller. Made by **Mixing Equipment Co.**, 1024 Garson Ave., Rochester 9, N. Y.

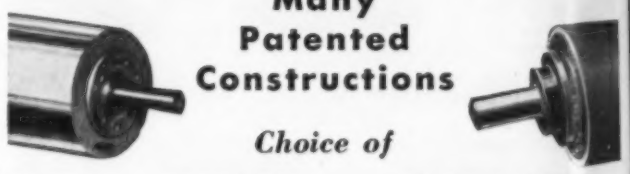
▲ For more details circle NED-2537 on enclosed inquiry slip ▲

What's YOUR Roll Problem?

The Answer is often:

USE SHAF-TITE* ROLLS

Many Patented Constructions



Choice of

METAL, RUBBER, or WOOD ROLLS

Send For NEW ROLL CATALOG No. 48

Industrial Roll Division

RODNEY HUNT MACHINE CO.

973 Main Street Orange, Mass., U. S. A.

*Reg. U.S. Pat. Off.

▲ For more details circle NED-2538 on enclosed inquiry slip ▲

Top Products In Every Line Cut Costs and Build Sales with AMERICAN PHILLIPS SCREWS

HOW THEY CUT COSTS: From vacuum cleaners to vending machines; from trucks to office appliances and suntan lamps . . . manufacturers use American Phillips Screws to speed up production, stop spoilage, and cut unit-costs. For these modern fastenings banish fumbling, crooked driving and scarred surfaces . . . *cut assembly time as much as 50%.*

HOW THEY BUILD SALES: On any product, the crossed-recess of American Phillips Screws is a "green light" to buyers who stop and look for an outward index of inward quality.

AMERICAN SCREW CO.
PROVIDENCE 1, R. I.

AMERICAN PHILLIPS Screws

▲ For more details circle NED-2539 on enclosed inquiry slip ▲

New di-acro POWERSHEAR

OFFERS CONTINUOUS ACTION *plus* VARIABLE SPEED

From 30 to 200 strokes per minute

for high speed

DIE-LESS DUPLICATING

The new Di-Acro POWERSHEAR has remarkable speed and accuracy for the production of small parts and pieces. Consider these points: 1. **CONTINUOUS SHEARING ACTION**—no clutch to engage! Feeding speed determines shearing speed. 2. **VARIABLE SPEED**—cutting cycle quickly set for each shearing operation. 3. **EASE OF OPERATION**—fatigue is reduced, accuracy increases, production soars. 4. **"SINGLE STROKE" SHEARING**—non-repeating safety clutch for jobs not adaptable to continuous shearing.

Any plant doing high speed precision work on smaller parts from any shearable material cannot afford to be without the DI-ACRO POWERSHEAR. Available in 12" and 24" shearing widths, capacity 16 gauge sheet steel. Also standard model.

See Di-Acro Exhibit Booth 316—Tool Engineers' Industrial Exposition, Philadelphia, Pa., April 10-14.

Send for 40 page "DIE-LESS DUPLICATING" catalog.

DI-ACRO O'NEIL-IRWIN MFG. CO.

354 8th Avenue, LAKE CITY, MINN.

▲ For more details circle NED-2540 on enclosed inquiry slip ▲

HERE'S
A GOOD WAY TO
CUT YOUR FIRE FIGHTING COSTS
ROCKWOOD
—TRIPLE-ACTION SG-48 WATERFOG NOZZLES

LIGHTweight
1. High velocity WaterFOG
2. Straight stream
3. Low velocity WaterFOG from extension applicator

Rockwood WaterFOG Nozzles will out-perform any other fog nozzles operating on either high or low pressures for all around fire fighting purposes.
Extinguishes fires in flammable liquids and ordinary combustibles faster and with less water.
Designed for use in industrial plants, chemical plants, oil refineries, mercantile and public buildings and municipal fire departments, etc.
Write for bulletin C-501R

ROCKWOOD SPRINKLER CO.
44 HARLOW STREET WORCESTER 5, MASS.

For more details circle NED-2541 on enclosed inquiry slip

INCREASE EQUIPMENT LIFE
DEVELOP BETTER PRODUCTS
with a G-E recording vibrometer

It locates harmful wearing vibration in shafts, bearings, gear trains, etc. It indicates the need for balancing on rotating machines. Employed by designers and users of machinery to insure quality and long service.

Gives permanent record of vibration characteristics.
Records amplitude and frequency.
Weighs only 7 pounds.
Only 8 inches long.
Easy to use.
Window for viewing stylus motion.

Write today for details contained in GEC-310 and see how the G-E Recording Vibrometer gives an instant permanent record of vibration. *Apparatus Dept., General Electric Co., Schenectady, N. Y.*
*Mfrs. suggested retail price

GENERAL ELECTRIC
6R7-25

For more details circle NED-2542 on enclosed inquiry slip

These AO Horsehide Gloves and Mittens Outwear Asbestos on Heat Jobs!

When you want the *combination* of protection against extreme heat and wear for your glove and mitten money, the AO 5X166 Heat Glove and 6X151 One-Finger Mitten are your best buys! What's more, they are more *flexible* — permitting workers to do a better job.

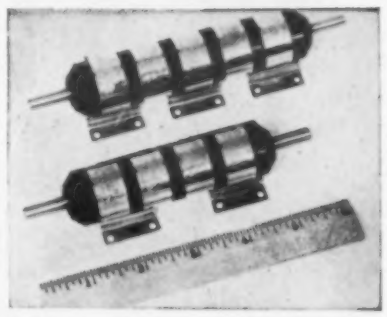
QUICK FACTS
- Specially tanned to resist heat.
- Heavy wool liner and full 4" chrome leather cuff also lined. (Also available with 2" cuff.)
- Clute pattern. Reinforced with leather strap around crotch of thumb.

Your nearest AO Safety Products Representative can supply you.

American Optical COMPANY
SAFETY PRODUCTS DIVISION
Southbridge, Massachusetts • Branches in Principal Cities

For more details circle NED-2543 on enclosed inquiry slip

MINIATURE SPEED CHANGERS
750,000:1 gear reduction possible



Several hundred ratios between 1000:1 and 750,000:1 are attained by adding one or two additional gearing sections to standard three-section miniature speed changer. Input speeds as high as 50,000 rpm and output torques up to 2 lb-in. are permissible. Very high ratios in hobbed gears and 'zero backlash' construction can be furnished at reduced torque rating. Weights of four and five-section units are approximately 6 and 7 oz respectively. Made by **Metron Instrument Co.**, 436 Lincoln St., Denver 9, Colo.

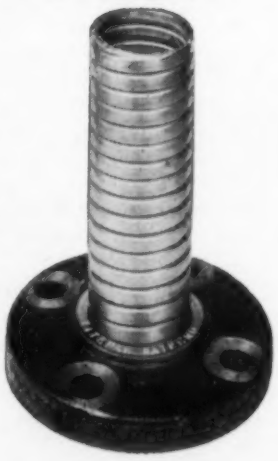
For more details circle NED-2544 on enclosed inquiry slip

MAGNESIUM HAND TRUCK
transports loads up or down stairs

Stair climbers incorporated in design of this model 40-D-600-SC magnesium hand truck enable operator to move loads between two levels such as stairs and ramps with minimum of trouble and effort. Truck weighs less than 12 lb, and its curved back permits carrying all types of packages, containers and bulk goods. Although light in weight, truck has heavy-duty load capacity. Made by **Magline, Inc.**, P. O. Box 346, Pinconning, Mich.

For more details circle NED-2545 on enclosed inquiry slip

METAL HOSE & FLANGE
flexible type handles up to 350 psi



Oil, gasoline and other volatile liquids can be conveyed without leakage by this Pennflex flexible metal hose and Titepak flanges. Simplified construction and temperproof metal provide light weight and durability. Hose and flange unit is applicable to petroleum, chemical and other industries handling volatiles for use in fluid line connections, container fillers, portable equipment and vibrating machinery. Made by **Pennsylvania Flexible Metallic Tubing Co.**, 7203 Powers Lane, Philadelphia 42, Pa.

For more details circle NED-2546 on enclosed inquiry slip

Empco JACKS

Set and KEEP Your Machines LEVEL!

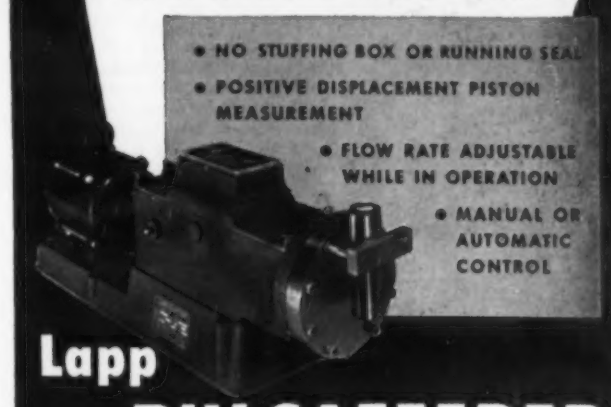
Machine Tool Manufacturers strongly emphasize the need, not only to set machines level, but to keep 'em that way. Periodic re-leveling is essential for accurate work tolerances. How often, depends on the type of foundation. No method of machine setting is stable enough to maintain the accuracy of initial leveling. It is important to check after first month of operation, then check periodically and re-level whenever necessary.
When a machine is set on EMPCO JACKS, the whole operation is the work of but a moment: Simply apply a wrench to the "hex" screw head, turn right or left until your level indicator reads "zero."

3 SIZES
No. 1—2" normal height
No. 2—2⅝" normal height
No. 3—3½" normal height

THE ENTERPRISE MACHINE PARTS CORPORATION
2727 JEROME AVE. DETROIT 12, MICH.

For more details circle NED-2547 on enclosed inquiry slip

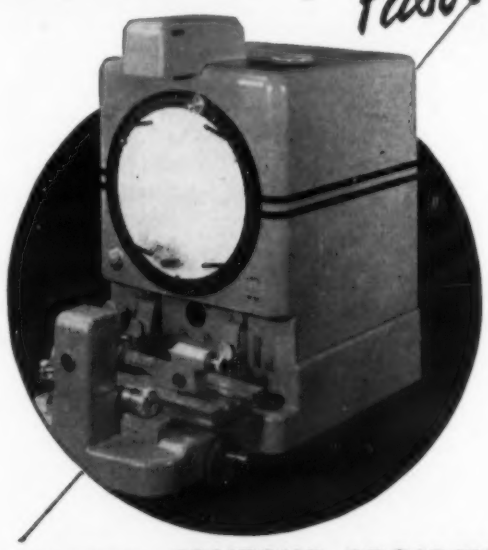
Here's Equipment Built to Stand Up Under Your Production Requirements for
METERED PRESSURE PUMPING
of Such Chemicals as:
SULPHURIC ACID • SODIUM HYDROXIDE
LIQUID CHLORINE • HYDROCHLORIC ACID
SLURRIES • CHLORINATED HYDROCARBONS
HYDROGEN PEROXIDE • NITRIC ACID
HYDROFLUORIC ACIDS • OLEUM • PROPANE
CYANIDE COMPOUNDS • STYRENE • FREON



Lapp PULSAFEEDER
PISTON-DIAPHRAGM CHEMICAL PROPORTIONING PUMP
WRITE for Bulletin 262 with complete description and specifications.
LAPP INSULATOR CO., INC., PROCESS EQUIPMENT DIVISION, 215 MAPLE STREET, LE ROY, N. Y.

For more details circle NED-2548 on enclosed inquiry slip

For Complete Inspection under Magnification— Fast,



the Kodak CONTOUR PROJECTOR
SHOWS { contours, of course, surface details . . . deep, blind holes

Need fast and accurate inspection of difficult shapes or easily distorted materials? Here's your solution:

The Kodak Contour Projector is very easy to use. Your operator—comfortably seated in a fully lighted room, unhampered by hoods or curtains—can dial up to 5 different magnifications without refocusing. Undistorted projections from 10× to 100× are seen on a 14-inch screen . . . seen in even, over-all brilliance many times that previously available with the same lamp power.

It's a versatile tool. *By just turning a knob, you get illumination through the lens itself to show surface conformations and deep, blind holes in full, brilliant detail.* And there's always 8 full inches from object to lens . . . at all magnifications.

▶ **Write for full details of this moderately priced precision instrument for fast inspection.**

EASTMAN KODAK COMPANY
Industrial Optical Sales Division
Rochester 4, N. Y.

Kodak

For more details circle NED-2549 on enclosed inquiry slip

Alnor

Velometer

Gives instant, direct reading of Air Velocity —Anywhere!

Here's a precision-built, self-contained, portable instrument that gives instant, accurate reading of air velocities—everywhere, in plants, mines, or mills. Measures speed of flow through ducts, grilles, motors, furnaces, or in the open. Needs no calculations or reference charts. Anyone can use it and get accurate measurements. Available in a wide range of scales, and with a wide assortment of jets and fittings if needed. You'll want full details and prices, so write for Bulletin No. 2448-G. Illinois Testing Laboratories, Inc., Room 529, 420 N. LaSalle Street, Chicago 10, Illinois.

Alnor

PRECISION INSTRUMENTS FOR EVERY INDUSTRY

For more details circle NED-2550 on enclosed inquiry slip

= NO Down-Time

Plant Superintendent looks at

MONARCH SOLID TIRES

No down time for tire maintenance—right! But that's only part of the story. Monarch Solid Tires have an extra long service life, so they lower materials handling costs that way, too. They're tough, stable, sure-footed, and they can't puncture—Monarch-equipped vehicles go anywhere in the plant.

Monarch specialization pays off for you in better industrial tires, including such special types as Monarch Easy-Roll, Cushion, Static Conductor, and Neoprene Tires.

Write for specific information on the use of Monarch Solid Tires in your plant. THE MONARCH RUBBER CO., 200 Lincoln Park, HARTVILLE, OHIO.

Specify Monarch Solid Tires on your industrial vehicles. Replacement tires available from the manufacturer of your equipment.

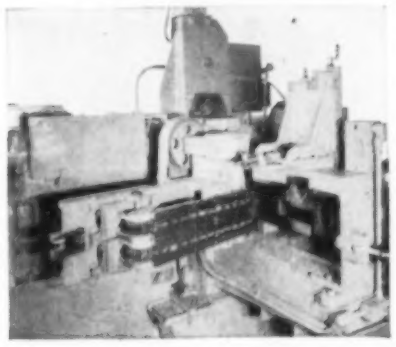
MONARCH

Specialists in Industrial Solid Tires and Molded Mechanical Rubber Goods

For more details circle NED-2551 on enclosed inquiry slip

DISK GRINDER

double spindle unit handles work up to 9½-in. diameter and ⅞-in. wide



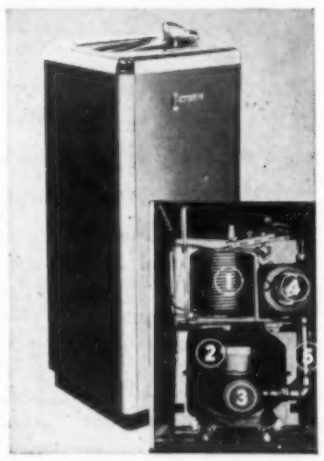
Developed for production grinding of parallel surfaces of ball bearing races, thrust washers, seal plates and similar parts, this double spindle disk grinder holds dimensional accuracy within 0.0005-in. and produces work parallel within 0.0001-in. It will handle work diameters from ¾ to 9½-in. and widths from 3/16 to ⅞-in. Bar-type device having either diamonds or ball bearing star cutters trues abrasive members. Machine has 30-hp motors with V-belt drive to grinding spindles which carry 30-in. disk type abrasive wheels.

Continuous-chain type feeding fixture carries work between abrasive members as it is received from two magazine loading fixtures. Latter are equipped with vibrating device to assure continuous flow of parts to feeder at high operating speeds. Size of finished parts is controlled by fixed tungsten carbide anvil and reed-mounted movable tungsten carbide anvil which actuates air jet connected with air-electric gaging head. This gaging device actuates feeding mechanism of grinding wheels to control size. Made by **Charles H. Besly & Co.**, Beloit, Wis.

For more details circle NED-2552 on enclosed inquiry slip

DRINKING WATER COOLER

usable in combustible atmospheres

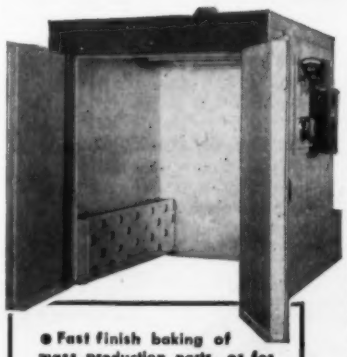


This explosionproof self-contained drinking water cooler can be installed in customarily restricted areas such as paint and chemical plants, refineries, collieries and grain processing plants. It will not generate static electricity or produce open sparks. Compressor and motor are hermetically sealed; and compressor terminal box, relay, thermostat control and all electrical wiring and fittings are enclosed in explosion-proof housings and conduit. Water cooled condenser, which is unaffected by lint or dust laden air, provides 10.3-gph capacity. Regardless of outside water pressure variations up to 85 psi, cooler delivers even flow of water without spurting and splashing. Stainless steel front and side panels are available for use where cooler is subjected to corrosive atmospheric conditions. Made by **Temprite Products Corp.**, 21 Piquette Ave., Detroit 2, Mich.

For more details circle NED-2553 on enclosed inquiry slip

"Any Way You Figure"

Up to 50% Faster Baking



Despatch OVENS

There's a Despatch Finish Baking Oven to meet the needs of both large factories and small shops. Wide range of uses includes aging, preheating, drying and curing. Ideal for baking insulating varnish on armatures . . . film surfaces of lacquer and enamel . . . wrinkle finishes on metal parts . . . hundreds of other baking operations. 12 to 240 cu. ft. capacities.

- Fast finish baking of mass production parts, or for repair service . . .
- Vertical and horizontal forced air circulation prevents over or under baking . . .
- Gas or electric operated . . . wide range of sizes . . . factory tested . . . shipped assembled . . ready for operation.

Write for Bulletins on RS Ovens and Trucks

Manufacturers of ovens for paint finishing . . dehydrating . . curing . . all industrial and laboratory applications.

DESPATCH OVEN CO. Established in 1902

325 DESPATCH BUILDING MINNEAPOLIS 14, MINNESOTA

For more details circle NED-2554 on enclosed inquiry slip

Now every shop can have the advantages of BAND SAWING

The New WELLS Model 49 A METAL CUTTING BAND SAW

The new Wells Model 49A fits the smallest shop's budget, yet it does a man-sized job in any plant. From its welded steel frame to its tubular steel base, the Wells Model 49A is a rugged shop tool that will give long, dependable service. Its portability is unequalled. Capacity: Rectangular—3½" x 6⅝", Rounds—3½" diameter. Easy to operate without special training, the Model 49A can be used by anyone in the shop. Automatic shut-off at the end of the cut eliminates the need for the operator to stand by. Write for complete details.

Wells SAWS

Wells

Products by Wells are Practical

METAL CUTTING BAND SAWS

WELLS MANUFACTURING CORPORATION 1313 HARDING ST., THREE RIVERS, MICHIGAN

For more details circle NED-2555 on enclosed inquiry slip

ONLY $215* FOR THE GREEN ENGRAVER . . . yet it's fast, versatile and rugged enough for die steel

The Green Engraver offers great speed and convenience. Quickly cuts up to four lines of letters from 3/64" to 1" on curved or flat surfaces whether made of metal, plastic or wood . . . operates by merely tracing master copy—*anyone* can do an expert job. Special attachments and engineering service available for production work. Just the thing for radio, electronic apparatus and instrument manufacturers. Write today for details.

For *quality* engraving on

- Panels
- Scales
- Name Plates
- Lenses
- Molds
- Dials
- Instruments

. . . also does routing, profiling and three dimensional modeling.

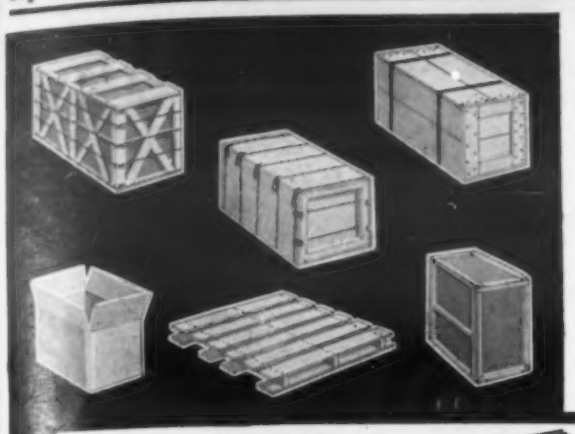
*Price does not include master type and special work holding fixtures.

GREEN

GREEN INSTRUMENT CO. 375 Putnam Ave. Cambridge, Mass.

For more details circle NED-2556 on enclosed inquiry slip

For more details circle NED-2557 on enclosed inquiry slip



CUT COSTS!
SAVE SPACE!
INCREASE PRODUCTION!

SEND FOR THIS FREE BOOKLET TODAY!

GENERAL BOX COMPANY..
★★★★ engineered shipping containers
GENERAL OFFICES: Illinois & Dearborn Sts. Chicago 10, Ill.
DISTRICT OFFICES AND PLANTS: Brooklyn, Cincinnati, Detroit, East St. Louis, Kansas City, Louisville, Milwaukee, Meridian, Sheboygan, Winchendon, Continental Box Company, Inc.: Houston, Dallas

▲ For more details circle NED-2558 on enclosed inquiry slip ▲

STANLEY HAMMERS
...each designed to do its job better

STANLEY NO. 51½ NAIL HAMMER

STANLEY NO. 310 BALL PEIN

STANLEY NO. 452 TINNER'S SETTING

STANLEY NO. 594 SOFT FACE

In the broad line of Stanley Hammers are types eminently fitted for a wide variety of work in industrial plants. Each of the types illustrated here is for a different kind of work.

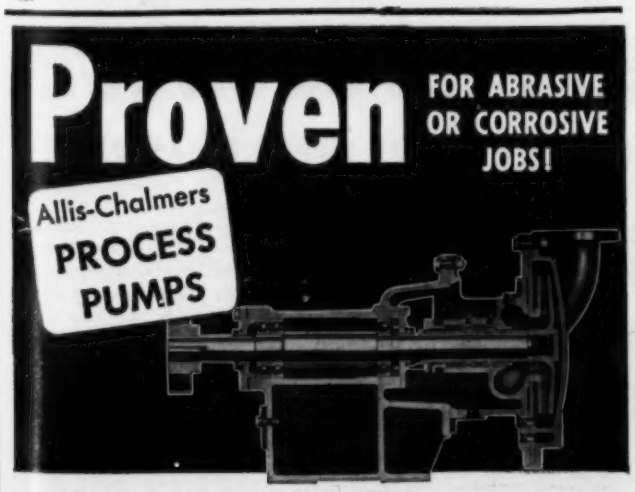
For the packing and shipping room, and building maintenance work, the No. 51½ Stanley Nail Hammer. For machine shop and product service work the No. 310 Ball Pein Hammer and the No. 232 Machinist's Riveting Hammer. For assembly and light metal forming, the No. 594 Soft Face Hammer. Each is available in a variety of weights and sizes to meet all industrial needs. Stanley Tools, New Britain, Conn.

THE TOOL BOX OF THE WORLD
STANLEY
Reg. U.S. Pat. Off.

HARDWARE • TOOLS • ELECTRIC TOOLS • STEEL STRAPPING • STEEL

▲ For more details circle NED-2559 on enclosed inquiry slip ▲

Proven FOR ABRASIVE OR CORROSIVE JOBS!



ALLIS-CHALMERS PROCESS PUMPS are designed for jobs on which ordinary pumps, even of special materials, quickly show excessive wear.

Users report savings as much as $1,000 per year per pump!

Stock shipment on pumps and parts in aluminum bronze, Ni-resist cast iron, 18% chrome steel, and 316 Stainless Steel. Call your A-C Authorized Dealer or Sales Office, or write for bulletin 08B6615.

CHECK THESE ADVANTAGES!

* Stuffing box on suction side of pump cuts leakage.
* Parts subject to varying wear can be individually replaced.
* Thicker metal offers longer life than ordinary design.
* Double volute casing balances radial hydraulic pressures.
* Adjustment compensates for wear without replacements

ALLIS-CHALMERS, 918A SO. 70 ST. MILWAUKEE, WIS.

A-2864

ALLIS-CHALMERS

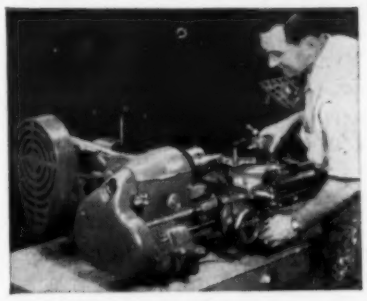
▲ For more details circle NED-2560 on enclosed inquiry slip ▲

CEILING AIR CIRCULATOR serves also as lighting fixture

Having 19-in. diameter, Strato-Vision thermostatically controlled air circulator and lighting fixture recirculates air every 3 minutes in 3000 cu ft of space. Louvers diffuse air downward to create cooling effect without drafts in warm weather; and in winter when artificial heat is used, it forces excess heat from ceiling area to living level of room to assure even distribution of heat. Constant air circulation dissipates unpleasant odors and smoke. Variable speed is controlled by rheostat, and unit operates quietly. Being suspended by four vibration absorbing springs to ceiling mounting plate, it is easily installed. Made by Wilster, Inc., distributed by **Transamerican Sales Co.**, Dept. NE, 5700 Detroit Ave., Cleveland 2, O.

▲ For more details circle NED-2561 on enclosed inquiry slip ▲

QUICK-CHANGE GEAR LATHE has 10-in. maximum swing over bed



Available in 3, 3½, 4 and 4½-ft bed lengths, Light Ten precision quick-change gear lathe is popularly priced machine. Quick-change gear box provides 48 thread cutting feeds, power longitudinal feeds or power cross feeds. Complete line of tools, attachments and accessories including taper attachment, handlever and handwheel collet attachments, collets and milling attachment is available for use with this lathe. Two types of horizontal drive units can be supplied: drive having 12 speeds ranging from 48 to 1435 rpm and which uses flat leather belt to headstock and drive with 16 speeds from 52 to 1365 rpm, using V-belt to headstock. Made by **South Bend Lathe Works**, 307 E. Madison St., South Bend 22, Ind.

▲ For more details circle NED-2562 on enclosed inquiry slip ▲

HEAVY-DUTY DRILL has scientifically designed handle

By incorporating Lamb Wedge-Lock handle, model 49 heavy-duty ¼-in. portable electric drill lessens operator fatigue while permitting fast continuous hole drilling. It is 7½ in. long and weighs 3¾ lb. Unit is powered by 1800-rpm universal motor and has compact aluminum housing, ball bearings on armature and intermediate spindle, and ball and needle roller bearings on chuck spindle. Made by **Skilsaw, Inc.**, 5027 Elston Ave., Chicago 30, Ill.

▲ For more details circle NED-2563 on enclosed inquiry slip ▲

COVERS THE DANGER AREA

IPCO WELDING CURTAINS

Workers and passers-by are protected from harmful rays given off by welding operations. Also serve as a protective shield against flying chips and scale. Made of special flameproof and waterproof canvas—or asbestos—complete with eyelets for suspending on rod or pipe support.

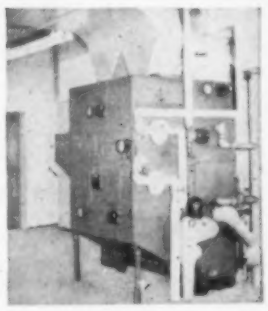
SALVAGE COVERS AND FIRE BLANKETS ALSO AVAILABLE
Write for Bulletin L-40

IPCO Safety Equipment for all Industries
INDUSTRIAL PRODUCTS COMPANY
2807 N. FOURTH STREET • PHILADELPHIA 33, PA.

▲ For more details circle NED-2564 on enclosed inquiry slip ▲

New Method Gives Precise Control in Air Conditioning

NIAGARA "Controlled Humidity Method" Uses HYGROL, Hygienic Liquid Absorbent



● This new method gives complete control of temperature and relative humidity, holding constant conditions or varying them at the will of the user. Especially, it provides dry air at normal atmospheric temperatures with little or no refrigeration required.

The air is filtered and then enters a chamber where it passes thru a spray of "Hygrol" Liquid (a hygienic hygroscopic chemical that absorbs the air-borne moisture and contains no salts or solids to precipitate). In the same chamber, cooling coils remove the latent heat of evaporation and also sensible heat as required.

The absorbent liquid spray falls into a tank at the base. It is piped to a concentrator, removing moisture taken from the air. The re-concentrated liquid returns to the system. This process is continuous, and the apparatus operates always at full capacity.

This equipment is manufactured in units providing from 1000 to 20,000 CFM of conditioned air.

Installations have been made in food and chemical process industries, in packaging hygroscopic products, for preventing condensation of moisture on metals and other products in storage, in air conditioning for laboratory control and for human comfort.

For further information, write Niagara Blower Co., Dept. ED, 405 Lexington Ave., New York 17, N. Y.

▲ For more details circle NED-2565 on enclosed inquiry slip ▲

ANEMOSTAT
famous for AIR DISTRIBUTION
SAVES WITH SPEED NUTS*
famous for COST REDUCTION

A multiple-function Tinnerman fastener replaces 3 parts, eliminates 6 assembly operations, and saves thousands of dollars annually.

That, briefly, sums up the experience that led Anemostat Corporation of America, New York, to switch to SPEED NUTS. This decision was the end result of a recent review of production and assembly costs on their draftless air diffusers.

Cost of the previous assembly method was compared with the new SPEED NUT method. As a result, *SPEED NUTS were specified, and are currently producing 50% lower material costs and substantial assembly savings.*

What about your product . . . isn't there a fastening job that multiple-function SPEED NUT brand fasteners can do better, more economically? Find out NOW. Also, write for your copy of "SPEED NUT Savings Stories". TINNERMAN PRODUCTS, INC., 2040 Fulton Road, Cleveland 13, Ohio. In Canada: Dominion Fasteners Limited, Hamilton.

TINNERMAN Speed Nuts
FASTEST THING IN FASTENINGS

▲ For more details circle NED-2566 on enclosed inquiry slip ▲

Eye Protection Can Feel Good and Look Good

Style B5 Metal Frame with saddle bridge and side shields.

These safety spectacles with either metal or plastic frames feel good because they fit any type of face with that "made-to-order" look. Comfortable fit is assured by their light weight and the variety of bridge widths and lens sizes available. They are furnished with or without side-shields, and fitted with WILLSON Super-Tough*, flat or curved lenses for ample protection on many heavy-duty operations.

Style A Metal Frame with rocker nose pads.

Styles WP and WPS Plastic Frames with and without sideshields.

For complete information on these products get in touch with your nearest WILLSON distributor or write us direct.

WILLSON

*T.M. Reg. U. S. Pat. Off.

WILLSON PRODUCTS, INC., 113 N. SECOND ST., READING, PA.

For more details circle **NED-2567** on enclosed inquiry slip

HAND-OPERATED ADDRESSER spirit type handles 250 addresses

Mail can be addressed quickly and accurately to moderate-sized mailing lists by this portable addresser. Loading and handling in same manner as camera, hand-operated device is suitable for printing when up to six lines of copy must be repeated on forms, tickets, slips, cartons and other objects. About 250 addresses on master spirit roll are quickly inserted into compact machine. Fluid is stored in cartridge wick which stays wet for full run. One motion applies fluid to envelope or card and prints address. Master copy of any mailing list can be typed or handwritten with equal effectiveness, and each will make 100 or more impressions. Price is $9.95 east and $10.95 west of Rockies. Made by **Heyer Corp.**, 1890 S. Kostner Ave., Chicago 23, Ill.

For more details circle **NED-2570** on enclosed inquiry slip

WELD-MASK PROTECTOR plastic plate is spatter-resistant

Manufactured from methyl methacrylate, clear plastic cover plates do not pit as readily from welding spatter as glass plates. They are 0.06-in. thick to assure adequate impact resistance and meet optical requirements of Federal Bureau of Standards. Two sizes are available: standard 2 x 4¼-in. unit, and 2 x 4⅛-in. model which can be supplied on special order. Made by **American Optical Co.**, 1492 Mechanic St., Southbridge, Mass.

For more details circle **NED-2571** on enclosed inquiry slip

STAINLESS STEEL FILTERS remove down to 5-micron particles

Supplying maximum filter area in small container, permanent Surfamax porous stainless steel filters are designed to give continuous service with minimum maintenance. Elements are in form of corrugated assemblies, having general shape of an accordian. Six pore-opening sizes are available, ranging from 5 to 165 microns. High throughput rates are obtained for liquids and gases because of high percentage of voids. Single nut opens filter container, and element is removed easily. Units are highly polished for easy cleaning.

Standard filters with pipe connections ranging from ¼ to 2-in. are available. On special order, units can be supplied up to 10-in. pipe size and in capacities up to 10,000 gpm. Made by **Micro Metallic Corp.**, 197 Bradford St., Brooklyn 7, N. Y.

For more details circle **NED-2572** on enclosed inquiry slip

"Since 1929, our **BAKER TRUCKS** have given us ***TOP PERFORMANCE*** at all times, with ***LOW COST*** and ***EASY MAINTENANCE***"

Cleveland Frog & Crossing Co.

Six Baker Trucks keep materials on the move at this busy Cleveland plant. Several are over 20 years old—and are still giving the same trouble-free, low-cost, quiet and dependable service as those purchased more recently.

"Before we installed our electric trucks," says this customer "we employed about 70 hand truckers—but the trucks enabled us to transfer them to productive work. One Baker truck is now doing the work of 12 men with hand trucks. It would be difficult to imagine how we could run our plant without such sturdy material handling equipment. We depend on these trucks."

Let us show you how dependable BAKER Trucks can cut your handling costs.

BAKER INDUSTRIAL TRUCK DIVISION
of The Baker-Raulang Company
1245 West 80th Street • Cleveland 2, Ohio

Baker INDUSTRIAL TRUCKS

For more details circle **NED-2574** on enclosed inquiry slip

PIPE MARKERS

anyone can use— everyone can read

QUIK-LABEL Pipe Markers conform to American Standards Association Pipe Identification System. QUIK-LABELS come on handy cards . . . stick without moistening. Names of materials printed in large black letters on correct ASA background colors. CAN BE READ UP TO 75 FEET. Markers for over 140 materials, ***including all materials listed in ASA Standard A13,*** available on Brady Stock Cards. Specials made to your order. QUIK-LABEL Pipe Markers are Silicone Plastic coated to resist dirt, grease, fumes, moisture . . . indoors or out. Replace slow and costly painting and hand stenciling. Exclusive Starter-Strip automatically releases part of label for fast peeling. QUIK-LABELS mark your pipes so that anyone who can read will know what's in them. ***QUIK-LABELS leave no room for doubt . . . or tragedy.*** Write for useful literature and FREE SAMPLES today.

FREE SAMPLES

W. H. BRADY COMPANY | *Established* 1914

Manufacturers of Self-Sticking Tape Products
Chippewa Falls 5, Wisconsin • Distributors in 125 Cities

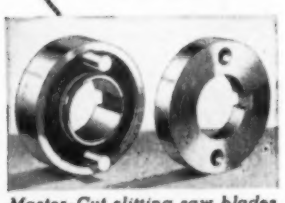
For more details circle **NED-2575** on enclosed inquiry slip

Master-Cut SAW BLADES GIVE YOU Extra Features AT PRICES NO HIGHER

Standard stock sizes—3", 4", 5", 6", 8" dia., 1/32" to 3/16" thick.

Why be satisfied with less?

Pay no more, but get extra value! Finest high speed steel. Strong tooth form; teeth, of uniform height, have correct rake angle to speed cutting. Side clearance and flat hub prevent binding; rigid holding. Dual Drive reduces breakage. *Extra features, but no extra cost!*

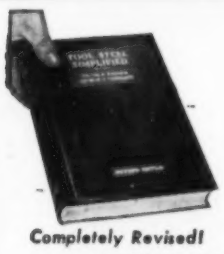


Master-Cut slitting saw blades can be supplied from stock in Dual Drive or conventional key drive type.

Get full details in Bulletin 220-N.

THE MOTCH & MERRYWEATHER MACHINERY CO.
PENTON BUILDING • CLEVELAND 13, OHIO
AT YOUR COMMAND • AN UNPARALLELED EXPERIENCE IN CIRCULAR SAWING

For more details circle **NED-2568** on enclosed inquiry slip



Completely Revised!

A 564-Page Authoritative Handbook
TOOL STEEL SIMPLIFIED
Yours for only $2.00 postpaid
Over 100,000 copies in use

Which of its 21 data-packed chapters can you use most profitably?...

Part I—Getting Acquainted with Tool Steel
Tool Steel Terms... Analysis of Tool Steel... Soundness and "Personality" of Tool Steel

Part II—Selecting the Right Steel
Alphabetical Tool Steel Selector... along with practical suggestions for selecting the one steel that will perform best, reduce costs

Part III—Properties, Heat Treatment and Testing of Tool Steel
Heat Treating Methods and Equipment (furnaces, fuels, and atmospheres)... Hardness and Toughness Testing (equipment, methods and results)

Part IV—Things Worth Knowing
Relation of Design to Heat Treatment... Hot Acid Etch Test... Timbre Test... Spark Testing... Quenching and Trouble Shooting

CLIP AND MAIL NOW

The Carpenter Steel Company, Reading, Pa. • Dept. 19C-2
Please send me, postpaid, your revised "Tool Steel Simplified".
I enclose $2.00 ($2.50 outside U.S.A.) in full payment of the book.

Name..... Title.....
Firm Name.....
Mailing Address.....
City..... State.....
(Please Print)

For more details circle **NED-2569** on enclosed inquiry slip

READINGS AT A GLANCE

for BOTH AC and DC

Instant Current Measurements Without Breaking Circuit or Insulation . . .

You can read 'em fast and accurately with the Columbia Tong Test Ammeter by merely clamping the tongs around the electrical conductor. Tong Test is the only instrument of its type that can measure both AC and DC. Cannot burn out for it has no windings. Safe, convenient and light in weight. Interchangeable scale ranges up to 1000 amperes. Five types to accommodate cables up to 3⅞", bus bars up to 4½" x ½". Voltage readings, too, with the Voltor Attachment.

Write for Tong Test Bulletin ND-400

COLUMBIA ELECTRIC MFG. CO.
4525 Hamilton Ave., Cleveland 14, Ohio

For more details circle **NED-2573** on enclosed inquiry slip

EYE LEVEL CHECK ON BOILER WATER LEVELS

Positive, constant check on boiler water levels is now possible at eye level—right on the instrument panel or other convenient location.

Yarway's Remote Liquid Level Indicator is always accurate because it's operated by the boiler water itself. No stuffing boxes. Indicating mechanism is never under pressure.

Ideal for indicating boiler water level, feed heater water level, superheater pressure differentials and tank levels. For complete description and operating details, write for Bulletin WG-1822.

YARNALL-WARING COMPANY
131 Mermaid Ave., Philadelphia 18, Pa.

YARWAY
REMOTE LIQUID LEVEL INDICATOR

For more details circle **NED-2576** on enclosed inquiry slip

NEW NICHOLSON WALL CHART
(28" x 54")

FREE

TO FILE-USING INDUSTRIAL CONCERNS

Here's an up-to-the-minute "A, B, C" of files — the new Nicholson Wall Chart comprising a quick, orderly visualization of "key" types.

The Chart (durably cloth-backed) is a valuable aid to modern shop economy toward the selection of *The right file for the job.* Purchasing, production and tool room heads find it a most helpful guide. Shop "school" classes learn rapidly through its use in "blackboard demonstrations."

If you will write directly to us on your business letterhead we will send your free copy of the Chart (only one available per customer).

Also free with each Wall Chart: A copy of the famous Nicholson book, "FILE FILOSOPHY"

— a valuable 48-page illustrated "textbook" on kinds, use and care of files and elaborating on the characteristics of many of the types shown in the Chart.

NICHOLSON FILE CO., 34 Acorn St., Providence 1, R. I.
(In Canada, Port Hope, Ont.)

NICHOLSON
A file for every purpose
SOLD THROUGH INDUSTRIAL DISTRIBUTORS

For more details circle **NED-2577** on enclosed inquiry slip

MULTIPLE DRILLING with a MULTI-DRILL
INCREASES CAPACITY
UP TO 800%

ADJUSTABLE TO ANY HOLE PATTERN FITS ANY DRILL PRESS

If your production requires drilling from 2 to 8 holes in a work piece, a MULTI-DRILL will cut costs and speed output up to 800%. The MULTI-DRILL is universally adjustable to any hole pattern—is compactly built to permit easy, unhampered operation with drill jigs or other special fixtures. Ruggedly built to take the wear and tear of high production work, the MULTI-DRILL will handle your long and short run multiple drilling jobs with ease and economy. The MULTI-DRILL will drill on hole centers as close as ½"—handle drill sizes up to ⅝" in steel. Special adaptations available.

There is a Commander MULTI-DRILL Distributor in your area. Write for his name, literature and complete details.

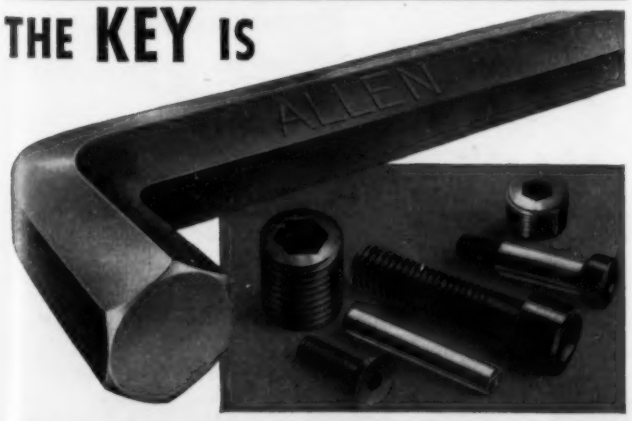
See us at Booth #426 ASTE Show, Philadelphia.

COMMANDER MFG. CO.
4220 WEST KINZIE ST. CHICAGO 24, ILL.

Product of *Commander* — Builder of the *Commander Tapper*

For more details circle **NED-2578** on enclosed inquiry slip

THE KEY IS



HALF THE FASTENING TEAM

Where's the point in perfectly accurate screws and pipe plugs like Allens if you use a wobbly offsize key that bends, strips or gives way? A genuine Allen Hex Key in a genuine Allen ⬡ Socket is the perfect combination. Genuine Allen Keys of Allenoy Steel have the name stamped right on the side, and are available singly or in handy kits at leading distributors everywhere.

WARNING
Allen-Type screws aren't necessarily Allen-Made. Get genuine "Pressur-Formd" Allen ⬡ Head screws in the black and silver box.

ALLEN ALLEN HEAD
MANUFACTURING COMPANY
Hartford 2, Connecticut, U. S. A.
NEW YORK, CLEVELAND, DETROIT, CHICAGO, LOS ANGELES

For more details circle **NED-2579** on enclosed inquiry slip

DUCT AIR CONDITIONERS
designed for remote installation to provide both cooling and heating

Suitable for industrial heating and ventilating as well as for central plant type air conditioning systems, types AH and AV air handling units range in size from 1650 to 14,060 cfm at 500-fpm coil face velocity when direct expansion coils are used and up to 18,000 cfm when water coils are used. Standard and double fin heating coils can be obtained, all of which utilize continuous plate fin construction. Each unit consists of fan section with two backwardly inclined blade Silentvane type fan wheels mounted on common shaft and coil section with drain pan for cooling and heating coils.

Fan section is composed of fabricated steel angle frame enclosing double fan unit with its shaft and bearings and supporting motor and drive. Motor and drive can be mounted on either end and the exhaust outlet positioned for horizontal or vertical discharge. Coil section consists of angle iron frame with insulated panels and accommodates standard Westinghouse-Sturtevant heating and cooling coils. Filter sections, face and by-pass dampers and other accessories are available. Made by **Westinghouse Electric Corp.**, Sturtevant Div., Hyde Park, Boston 36, Mass.

For more details circle **NED-2580** on enclosed inquiry slip

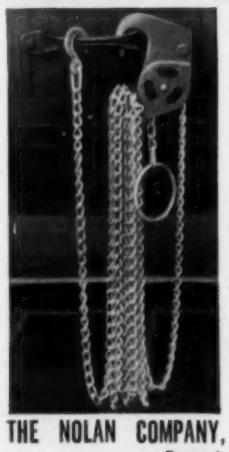
AUTOMATIC SCALE
rejects off-weight containers

When installed in conveyor system, automatic weight classifying scale will determine if filled cases, cartons and containers are within predetermined weight tolerance. It will indicate also if case contains proper number of units and whether or not each unit in case is full measure. Cartons of such items as paper products, chemicals, foods, cigarettes, bottled or canned liquids and assembled parts can be weighed and classified.

Scale is equipped with photoelectric controls and will advance correct-weight cartons along conveyor. It can be adapted to reject off-weight cartons onto separate conveyor or to stop main conveyor until case is removed manually. If desired, it can be made to count number and print weight of cartons. It will handle up to 15 containers per minute and is recommended for items having gross weight of at least 15 lb. Made by **Toledo Scale Co.**, Telegraph Rd., Toledo 1, O.

For more details circle **NED-2581** on enclosed inquiry slip

Opening Box Car Doors GUARANTEED!



NOLAN ONE MAN CAR DOOR OPENER

One man can open the most binding balky box car door with the Nolan Car Door Opener. Get greater safety . . . speed loading and unloading schedules . . . order an ample supply to fill your needs today!

• No strained muscles. No slips or falls. No broken arms, legs or mashed fingers. No fatalities. No time wasted. No "gangs" needed. No time loss.

Write for free descriptive literature.

THE NOLAN COMPANY, 128 Pennsylvania St., Bowerston, O.
Formerly The Mining Safety Device Co.

For more details circle **NED-2582** on enclosed inquiry slip

NEW! Volatile Solvent

CARBON MET

A HALOGENATED AROMATIC HYDROCARBON

A specific replacement for toxic Carbon Tetrachloride

U. S. Pat. 2318812

Out and out metal dry cleaning solvent and degreaser in ready-to-use "Handy Kit" containing Patented dip and drier basket.*

- Quick Cutting solvent against stubborn dirt and grease.
- Non-Explosive and relatively non-toxic.
- Non-Corrosive to metals.
- Fast, clean evaporation.
- Non-Ionic . . . ideal for degreasing and cleaning electrical parts.

MUCH FASTER CUTTING THEN "CARBON TET" . . . CAUSES NO RUSTING . . . LEAVES NO FILM

*also economical 55 gal. size drum

IMMEDIATE DELIVERY — 1 GALLON OR A TANK CAR

CURRAN CORP.
Mfg. Chemists
LAWRENCE, MASS.
120 South Canal St.

For more details circle **NED-2583** on enclosed inquiry slip

HERE'S HOW **Pangborn** *CAN SAVE YOU MONEY*

No matter what kind of metal parts you make . . . castings, forgings or stampings — whether they're large or small, intricate, plain or fragile . . . *Pangborn Blast Cleaning equipment* cleans them *at a profit!* Rust, grime, dirt, paint, gum, sand disappear in record time. Breakage costs go down, while cleaning quality improves!

Scores of Pangborn users report labor savings from $5,000 to $11,000—savings in cleaning time up to 95.8%. In many cases one Pangborn Blast Cleaning unit replaces five old-fashioned machines!

If you want low-cost, high-quality cleaning like this — see Pangborn first! Pangborn has more than 46 years of blast cleaning experience. Pangborn engineers are well qualified to give you the correct cleaning equipment you need.

FIND OUT HOW MUCH YOU CAN SAVE

To get full details about Pangborn equipment, mail coupon today for Bulletin 1200. Address: PANGBORN CORPORATION, 294 Pangborn Blvd., Hagerstown, Maryland.

Pangborn

BLAST CLEANS CHEAPER
with the right equipment for every job

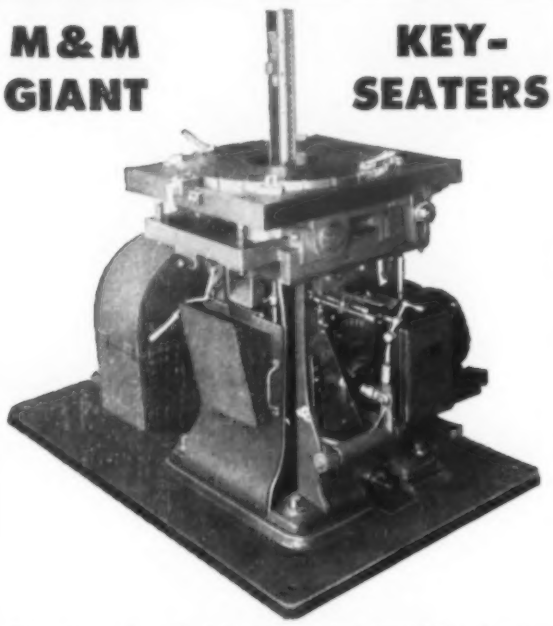
MAIL TODAY PANGBORN CORPORATION
294 Pangborn Blvd., Hagerstown, Md.

Gentlemen:
Yes, I want to save money on cleaning costs. Send me full information without obligation.

Name.....
Company.....
Address.....
City.....Zone.....State.....

For more details circle **NED-2584** on enclosed inquiry slip

M&M GIANT KEY-SEATERS



Giant Keyseaters, built in various sizes, speedily and accurately cut keyways or splines in pulleys, gears, and other machine parts. Special fixtures and cutters are available for those "hard-to-do" internal finishing operations which cannot be efficiently accomplished otherwise. Send us your problems.

MITTS & MERRILL

1000 SOUTH WATER STREET • SAGINAW, MICHIGAN

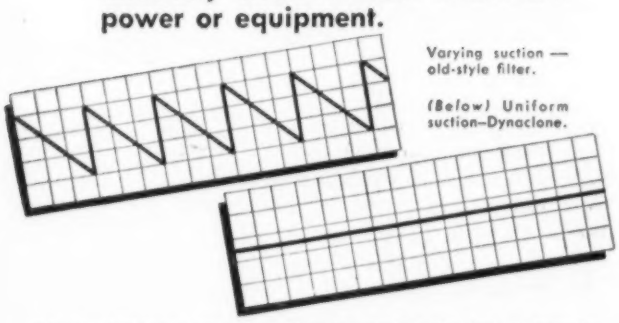
For more details circle NED-2587 on enclosed inquiry slip

NEW... Cloth Screen Dust Filter

SLY DYNACLONE*

Offers 5 NEW Advantages

1. Eliminates mechanical shaking.
2. Provides uniform suction at dust source.
3. Assures longer bag life . . .
4. Minimum maintenance.
5. Keeps itself automatically and continuously clean without additional power or equipment.



Varying suction — old-style filter.

(Below) Uniform suction—Dynaclone.

This revolutionary new dust filter is another Sly first. Extremely simple and thoroughly dependable, it eliminates entirely the gremlin of mechanical shaking and provides uniform suction of air at dust source.

This uniform suction is achieved by a simple device which cleans the filter bags successively by a reverse flow of air — the same suction which draws the dust onto the filter cloth is reversed to blow it off.

Since this reverse air suction operates continually, the new Sly Filter requires no shutdowns for removing dust from the cloth.

No mechanical shaking or flexing device is needed, eliminating all strain and wear on the filter bags.

The simplicity of design and operation and elimination of all auxiliary equipment for periodic cleaning of bags mean a saving of floor space and a very minimum of maintenance.

The result of long experimentation and exhaustive tests, the Sly Dynaclone has thoroughly proved itself. It provides substantial savings over any other type of cloth screen dust collection. Write for complete information.

*Patent Applied for

Send for descriptive bulletin just out on the new Sly Dynaclone — the ultimate in filter performance.

PIONEERS AND LEADERS IN INDUSTRIAL DUST CONTROL

THE W. W. SLY MANUFACTURING CO.

4748 TRAIN AVENUE • CLEVELAND 2, OHIO

NEW YORK • CHICAGO • ST. LOUIS • PHILADELPHIA
DETROIT • MINNEAPOLIS • BIRMINGHAM • CINCINNATI
LOS ANGELES • ROCHESTER • TORONTO

For more details circle NED-2588 on enclosed inquiry slip

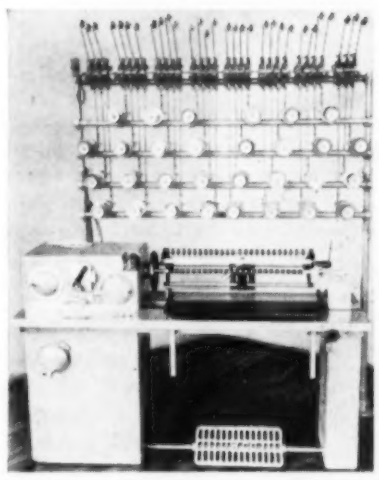
STOCKPILE BUCKET LOADER
has 12-ft clearance and 15-mph speed

Handling all bulk materials at speeds up to 3 cu yd per minute, model 543 bucket loader has solid plate elevating boom mounted on tractor-type pneumatic-tired

chassis. Truck-type worm and roller steering allows easy maneuvering in cramped places. Two forward and two reverse speeds enable operator to compensate for material being handled and power requirements. High reverse gives fast out-of-pile speed to escape cave-ins. Power-hydraulic raising and lowering of elevating boom controls level of feeding spirals and follow-up scraper. Overload release sprocket protects against overload damage and automatically resets after overload. Automatic load trimming is possible with power-hydraulically controlled swivel loading conveyor, available in 163 and 199-in. lengths. Made by **Barber-Greene Co.**, 645 W. Park Ave., Aurora, Ill.

For more details circle NED-2589 on enclosed inquiry slip

MANUAL COIL WINDER
produces paper-insulated coils in multiple or stick form



Featuring quick setup and fingertip control, No. 108 coil winder can be adjusted quickly to accommodate changing requirements of wire size, coil length and diameter. Leadscrew-type traverse provides positive lay of wire and also permits lead attachment procedures without disturbing traverse setting. Designed as turns - per - inch system, leadscrew gearing is independent of length of traverse. Operated by spring-loaded double-throw jaw-reversing clutch, leadscrew has Acme thread with ten turns per inch and accuracy within 0.003-in.

Power is supplied by ½-hp constant speed alternating current motor through adjustable-sheave speed controller to multiple-disk friction clutch attached directly to spindle. Speed, varied by turning crank on front of column, ranges from 400 to 2200 rpm. Wire-turn counter can be preset to stop machine when correct number of wire turns has been wound. Made by **Universal Winding Co.**, P. O. Box 1605, Dept. N, Providence, R. I.

For more details circle NED-2590 on enclosed inquiry slip

HEAT TREAT DEPARTMENTS...

send for new

ROLOCK BULLETIN

Fabricated-welded alloy Pit-Type Furnace Retorts, Drop-bottom Stainless Baskets, Inconel Lift Post and Nitriding Basket assemblies, Muffles, Brazing Trays, Salt Pot Baskets, etc. Save weight, time, heat, atmosphere, rejects . . . with lighter weldments for greatest resistance to exposure, shock, abrasion.

ROLOCK INC., 1412 Kings Highway, Fairfield, Conn.

JOB-ENGINEERED for better work
Easier Operation, Lower Cost

2RLSO

For more details circle NED-2591 on enclosed inquiry slip

ACE gives you Ace-High Quality in **PLASTIC BALLS**

COMPLETELY SEAMLESS
PRECISION FABRICATED

- All sizes (⅛" to 1¾")
- All plastic materials
- A wide variety of colors

Write today for Color Bulletins and Samples

Complete facilities for fabricating plastic parts for all industries. Estimates submitted promptly upon receipt of your blueprints or specifications.

ACE HIGH QUALITY TRADE MARK

ACE PLASTIC COMPANY
Precision Plastic Fabricators

91-28 Van Wyck Blvd., Jamaica 1, N. Y.

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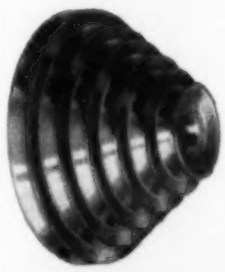
CONGRESS PULLEYS

Big stocks. Immediate delivery of hundreds of standard sizes. Complete engineering facilities for designing and building pulleys for special purposes. Consult our engineers on your Drive requirements.

VARIABLE SPEED
Handle speed variations up to 30%. O.D.'s from 3¼" to 4½". Diamond bored and individually tested.

STEP CONE
From 3" 2-step, to 8" 6-step. Full range of bore sizes. Precision built.



FHP and MULTIPLE V-BELTS
All standard sizes carried in stock.

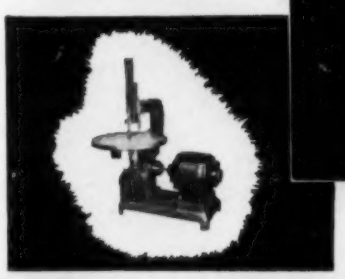
Q-D (Quick Detachable) SHEAVES
Always tight on shaft.

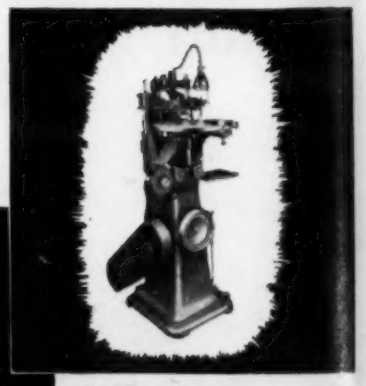
WRITE for CATALOGS

CONGRESS DIAMOND BORED **DRIVES**
3750 E. OUTER DRIVE, DETROIT 34, MICH.

For more details circle NED-2593 on enclosed inquiry slip

SPEED UP DIE MAKING





OLIVER OF ADRIAN

OLIVER DIE MAKERS are *faster*, more *accurate* and will SAVE as much as 50 to 60% of the labor on your die costs. Modernize your tool room. Old, obsolete, hand methods of die making are *expensive, slow* and *laborious*.

OLIVER DIE MAKERS are made in five models. The Heavy Duty Oliver Die Maker has 6 speeds, works in metal up to 3" thick, has variable strokes to 5" plus hydraulic feed. The Oliver Bench Model S-1 is a single speed die maker for use on tool steel up to 1" thick.

WRITE today for complete technical information on OLIVER DIE MAKERS. Their versatility and reasonable cost will amaze you.

OLIVER INSTRUMENT CO.
1412 E. MAUMEE • ADRIAN, MICHIGAN

AUTOMATIC DRILL GRINDERS · TOOL & CUTTER GRINDERS—DRILL POINT THINNERS—TEMPLATE TOOL GRINDERS—FACE MILL GRINDERS—DIEMAKING MACHINES

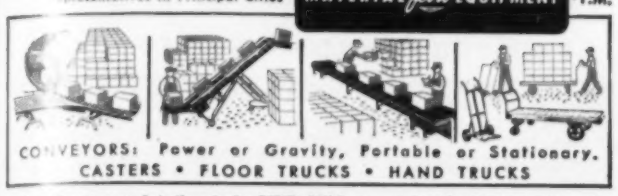
For more details circle NED-2594 on enclosed inquiry slip

Fast trip for stampings

Stampings move quickly and continuously from one punch press to another — or direct from press to tote box — on Rapistan Press-veyors*! These sturdy, cleated belt conveyors deliver stampings at a convenient working height . . . reduce damage to small parts . . . speed up production . . . cut handling costs. *Write for complete details!*

THE RAPIDS-STANDARD CO., Inc.
Rapistan Building
Grand Rapids, Mich.
Representatives in Principal Cities

Rapistan MATERIAL flow EQUIPMENT *T.M.

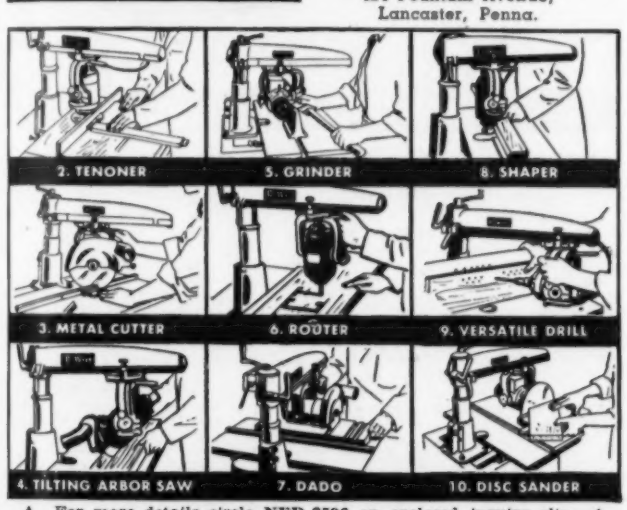


▲ For more details circle **NED-2595** on enclosed inquiry slip ▲

10 POWER MACHINES IN ONE!

That's what you have (and more) when you own a flexible, all-purpose DeWalt. It's fast, accurate, safe—built for continuous service. Write for catalog.

DE WALT INC.
124 Fountain Avenue,
Lancaster, Penna.



▲ For more details circle **NED-2596** on enclosed inquiry slip ▲

You will find this special S.A.E. Folder especially informative and useful. Revised to date, it contains Felt Standards and Specifications, and samples of the 15 S.A.E. Felts. Write for it on your letterhead and your copy will be mailed to you.

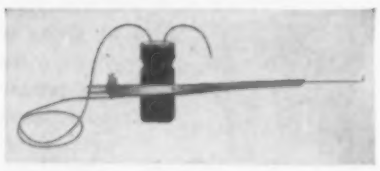
American Felt Company
TRADE MARK

GENERAL OFFICES: 62 Glenville Road, Glenville, Conn. PLANTS: Glenville, Conn., Franklin, Mass; Newburgh, N. Y.; Detroit, Mich.; Westerly, R. I.

SALES OFFICES: New York, Boston, Chicago, Detroit, Cleveland, Rochester, Philadelphia, St. Louis, Atlanta, Dallas, San Francisco, Los Angeles, Portland, Seattle, Montreal.

▲ For more details circle **NED-2597** on enclosed inquiry slip ▲

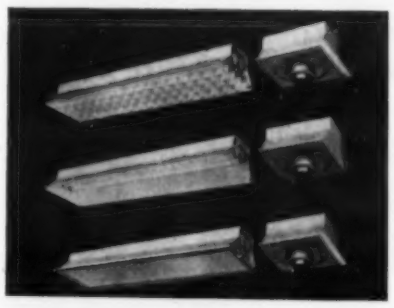
AUTOMATIC CHART PEN
will write for several months



Working on capillary principle and using closed system, Never-Dry stainless steel chart pen utilizes bottle ink reservoir. Small flexible tube leads from bottle to pen so that ink feeds at same rate it is used. Pen makes clear sharp record without smear and uses regular or fast-drying inks. Closed system prevents ink from clogging or accumulating dust. Pen is available for use with practically any type of recording instrument. Made by **American Recording Chart Co.**, Eleventh & Dacotah Sts., Los Angeles 23, Calif.

▲ For more details circle **NED-2598** on enclosed inquiry slip ▲

LIGHTING SYSTEM
consists of troffers and spotlights



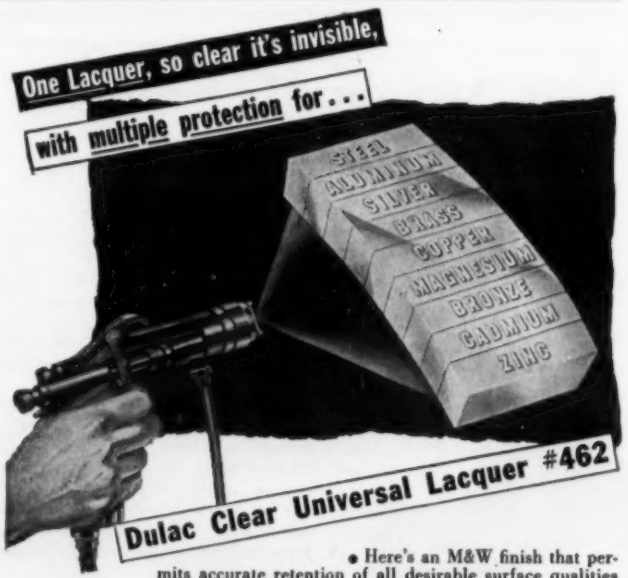
Requiring only 7¾ in. above finished ceiling, type TS shallow troffer fluorescent luminaire with incandescent spotlighting is easily installed by attaching housing to U-bracket supports. Louver, plain ribbed glass and prismatic lens types of shielding are available. All hinge to basic housing and are interchangeable. Basic housings are supplied in 4-ft lengths in two and three-lamp models. Two-lamp 8-ft unit is obtainable that accommodates 96-in. lamp. Type SR-150 companion swiveling incandescent spotlight is designed for use as individual recessed unit or within rows or groups of troffers. It utilizes 150-w PAR projector lamp and is shielded by concentric ring louver. Made by **Westinghouse Electric Corp.**, P. O. Box 2099, Pittsburgh 30, Pa.

▲ For more details circle **NED-2599** on enclosed inquiry slip ▲

SPLIT THRUST WASHERS
of bronze for quick bearing repair

Made to specification in any practicable size, Sabeco split thrust washers can be slipped over shaft and locked with safety key to effect on-the-spot repair without dismantling machine. They can be used on heavy construction machinery, plant machinery, materials moving equipment, oil field equipment, power house and other large electrical installations and large pumping stations. Washers are made of Sabeco bronze which is combination of high percentage of pure copper, tin and lead with maximum of 0.2 per cent impurities. Made by **Saginaw Bearing Co.**, 829 S. Water St., Saginaw, Mich.

▲ For more details circle **NED-2600** on enclosed inquiry slip ▲



• Here's an M&W finish that permits accurate retention of all desirable surface qualities of most metals . . . that adds lasting protection against heat, cold, weather, corrosion, stain and perspiration — Dulac Clear Universal Lacquer #462. It's formulated to give good adhesion with either the spray, dip or brush method. And it fits into fast production schedules because in five to ten minutes this successful general purpose lacquer dries out of dust . . . hardens in one hour. For complete information, write for Technical Data Bulletin 110 or let an M&W technical consultant discuss your requirements privately with you.

PIONEERS IN PROTECTION M&W Co 1876 . . . *where industry goes with finishing problems*

MAAS & WALDSTEIN COMPANY
Newark 4, N. J. • Chicago 12, Ill. • Los Angeles 36, Calif.
Pacific Coast Division: SMITH-DAVIS CO., 1075 Venice Boulevard, Los Angeles 34
MANUFACTURERS OF INDUSTRIAL FINISHES

▲ For more details circle **NED-2601** on enclosed inquiry slip ▲

Cuts Painting Costs

Speed up your production painting with new MYSTIK PAPER MASKING TAPE. Strong "self-stik" adhesive really sticks and stays . . . guards against bleed. Goes on fast, holds tight, peels off clean. Write for information on this and other MYSTIK industrial products: Mystik Adhesive Products, 2657 North Kildare, Chicago 39, Offices in principal cities.

FREE... Samples and complete literature available on request—write today.

Mystik SELF-STIK PAPER MASKING **Tape**

▲ For more details circle **NED-2602** on enclosed inquiry slip ▲

HALVE YOUR ENGINE WEIGHT WITH THIS

2 horsepower
23 pound

Super Smooth "Twin"

● Give 'em something new to talk about! — Pare weight, streamline your design with Power Products' latest — a 2 h.p., 2-cycle gasoline engine only **half** the weight of any engine anywhere near it in power or performance.

Available in both horizontal and vertical models

Built rugged, it is easy-starting, extremely tiltable (up to 45° without stalling), and its twin opposed cylinders smooth vibration to a minimum.

We adapt our engines to fit your products

Power Products engineers have worked out adaptations for many different kinds of equipment. Let them show you how your products, too will gain in portability, appearance and saleability with this amazing 23-lb. "two-horse." . . . Just ask

POWER PRODUCTS CORPORATION
GRAFTON 7, WISCONSIN

▲ For more details circle **NED-2603** on enclosed inquiry slip ▲

Quick, Thorough Cleaning!

General Electric Furnace and Boiler Cleaner

This unit is designed to facilitate quick, thorough cleaning of all types of heating systems. Comes equipped with standard tools including 6-ft metal and 10-ft rubber hose. Chimney-cleaning equipment for use in cleaning flues, air ducts, and chimneys available at small extra cost. Send for new catalogue showing this and other models of General Electric Heavy-duty Cleaning Equipment.

MAIL TODAY

General Electric Company, Dept 22-2617
1285 Boston Ave., Bridgeport 2, Connecticut
Send new catalogue showing General Electric Furnace Cleaner and other heavy-duty cleaning equipment.

Name.....
Firm.....
Address.....
City..... State.....

GENERAL ELECTRIC

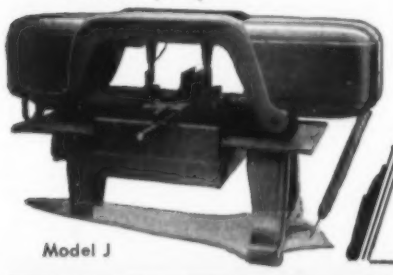
▲ For more details circle **NED-2604** on enclosed inquiry slip ▲

EXTRA SPEED..!

Save time, eliminate production slow-up and reduce labor costs by using this highly efficient metal cut-off band saw. It has extra speed through its extreme rigidity and saw support, allowing more feet per minute in saw travel. The set-up is quick, the cutting action continuous. It's accurate, insuring square true cuts. Operates and shuts off automatically. Model J, 10" x 18" capacity.

Also JUNIOR MODEL B, 5" x 10" capacity.

JOHNSON METAL CUT-OFF BAND SAW



Model J

Write for CATALOG!

JOHNSON MANUFACTURING CORP.
ALBION, MICHIGAN

▲ For more details circle NED-2605 on enclosed inquiry slip ▲

Handy Helper that gives you

Power

FOR HAND PIPE TOOLS

Model "400" can be furnished with legs, handy tool tray, feet and all fittings at slight additional cost.

RIDGID Model "400"

...lightest power unit made

● One man alone can move this job-tested Model "400" around on the job. Weighs just a little over 100 lbs., gives you plenty of power for hand tool threading, cutting and reaming jobs. Universal motor—forward, reverse, light socket power. RIDGID 3-jaw chuck in front with chuck wrench ejector; self-centering workholder in rear turns with pipe. Sealed-in lubrication—no oil spillage. Many thousands of Model "400" Power Drives are now in actual service. Buy one at your Supply House.

RIDGID
WORK-SAVER PIPE TOOLS

THE RIDGE TOOL CO. • ELYRIA, OHIO

▲ For more details circle NED-2606 on enclosed inquiry slip ▲

PORTABLE SPRAY UNIT
improved pump extends useful life

Model No. 3 electric Vibro-Sprayer spray unit has been improved by incorporating hand fittings and nozzle adjustment that require no tools. Its all-purpose welded one-piece nozzle disks will handle glossy and wall paints, enamel, lacquer, varnish, liquid wax, light oils and insecticides. Paint container is 25-oz Mason jar that employs self-sealing gasket. Light compact molded-plastic motor-pump housing facilitates one-hand operation, and fast-action trigger switch provides improved spray control. Unit weighs 2½ lb, measures 8⅜ x 6¼ x 4 in. and can be plugged into any 110/125-v ac outlet. Made by **Burgess Battery Co.**, Handicraft Div., Dept. V-100, Lake Zurich, Ill.

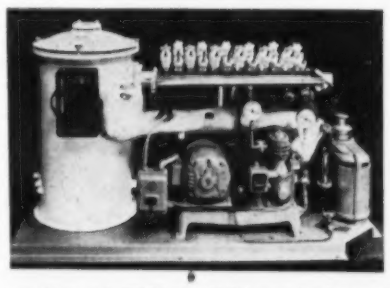
▲ For more details circle NED-2607 on enclosed inquiry slip ▲

ELECTRICAL ANEMOMETER
is unaffected by temperature change

Instantaneous, direct and accurate readings of air velocities from 5 to 6000 fpm with expanded scale in low velocity ranges are afforded by model G Air-Meter. Built-in temperature compensation prevents momentary error in velocity reading when probe is subjected to sudden changes of temperature. Instrument is usable in air conditioning, process control and research installations where it is desired to obtain readings quickly. Group of practical accessories is obtainable including carrying case with battery-operated power pack for use where 110-v ac power supply is not available. Made by **Hastings Instrument Co.**, P. O. Box 1275, Superhighway, Hampton, Va.

▲ For more details circle NED-2608 on enclosed inquiry slip ▲

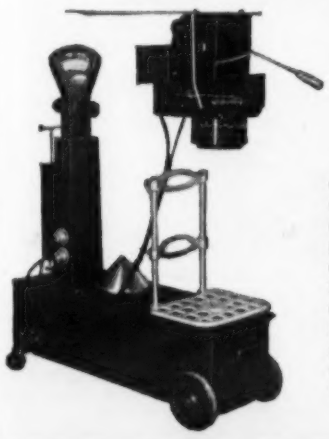
FREEZE-DRYING UNIT
batch capacity is 3500 milliliters



Supplied as packaged unit, model 103-FPM freeze-drying unit consists of manifold having 24 valve ports, Freon refrigerated condenser, high vacuum McLeod gage and high vacuum Microvac pump with oil clarifier. It has capacity of 7500 milliliters before defrosting is necessary. Self-contained and mounted on flanged floor pedestal, it is 40 in. high and requires floor space of 38 x 72 in. Made by **F. J. Stokes Machine Co.**, 5900 Tabor Rd., Philadelphia 20, Pa.

▲ For more details circle NED-2609 on enclosed inquiry slip ▲

New Automatic Scale with Dust Control . . .



Here is EXACT WEIGHT'S new unit for accurate automatic packaging, weighing and checking of free flowing materials in open mouth bags up to 150 lbs. The new unit consists of a time proven heavy duty EXACT WEIGHT Scale (floor operation) with dial of 4 ozs over and underweight by 1 oz graduations . . . automatic dustless valve . . . double photo cell electric cut off. This scale, already in use in the great carbon black industry, has many industrial uses in automatic packaging of all free flowing materials where dust control is a factor. For full details write for information covering Model 1324CB.

EXACT WEIGHT SCALES
Industrial Precision

THE EXACT WEIGHT SCALE COMPANY
129 W. Fifth Avenue, Columbus 8, Ohio
2920 Bloor St., W., Toronto 18, Canada

▲ For more details circle NED-2610 on enclosed inquiry slip ▲

FOR HYDRAULIC EQUIPMENT

This is THE Folder

Write for it.

DO YOU USE OR EXPECT TO USE HYDRAULIC OIL. PUMPS, MOTORS, VALVES, CYLINDERS ? ?
THEN YOU SHOULD HAVE THIS FOLDER.

THE COMMERCIAL SHEARING & STAMPING CO.
P. O. BOX 719 YOUNGSTOWN 1, OHIO

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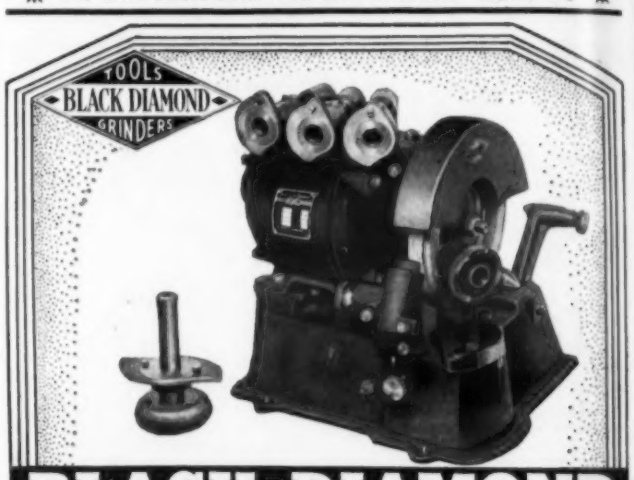


BLACK DIAMOND
PRECISION DRILL GRINDER

FOR THE PARTICULAR JOB OF SHARPENING SMALL DRILLS — AT 50% SAVINGS

Black Diamond Grinders cut 50% and more on drill sharpening and drilling costs. They sharpen small drills so efficiently and accurately that drill breakage and work spoilage are reduced to an absolute minimum.

Anyone can operate a Black Diamond. Even the most inexperienced can keep all small drills sharp—and true centered with smooth lips accurately ground to the same length correct angle and clearance for fast, precision drilling.

The built-in Diamond Point Dresser, is instantly available to keep the grinding wheel sharp cutting and the Web Thinning Attachment cares for all types of Notched Points.

If you use small drills, singly or in gangs, this moderately priced grinder will keep any quantity of small drills sharp, ready for use. Every shop should own a Black Diamond. Write for New Bulletin.

BLACK DIAMOND SAW & MACHINE WORKS, INC.
NATICK, MASSACHUSETTS

▲ For more details circle NED-2612 on enclosed inquiry slip ▲

New POCKET COMPARATOR saves you time and money inspecting small parts...

HERE'S WHAT IT IS

The Pocket Comparator is a precision optical measuring instrument for the inspection of small parts. Measurements are accomplished through a combination of a high-precision 6-power magnifying lens and an engraved pattern or reticle. The reticle is calibrated for measuring lengths, widths, circles, radii and angles.

HERE'S WHAT IT DOES

Tool Room and Production Use:

Checks forms and dimensions of punches, dies, gauges, cutting tools.

Checks sizes and forms of templates, layouts, cutting edges, etc.

Checks radii, angles, chamfers, threads, small holes, lineal, radial and tangent dimensions.

General Use:

For metallurgists and chemists—general laboratory work.

For textile and paper industries—for checking grades and flaws.

For die-casting and plastic molding—general inspection.

For instrument makers, jewelers, etc., for checking size, grade, form, flaws, etc.

a product of BELL & HOWELL CO. *distributed by*

Write for FREE descriptive folder

NATIONAL TOOL CO.
11210 Madison Avenue Cleveland 2, Ohio

▲ For more details circle NED-2613 on enclosed inquiry slip ▲

NOW!

McGILL Levolier® No. 41

GUARANTEED Unconditionally

Levolier Model 41 6 Amp. "T" rated, 125 volt switch is unconditionally guaranteed when used in lighting circuits. In case of failure a new Model 41 switch will be furnished without charge.

When you install Levolier Model 41 switches in lighting circuits, you've installed the switch that will not fail. No kickbacks or complaints. Just dependable, always-working performance. In fact, the patented Levolier action is so positive that the No. 41 is unconditionally guaranteed*. Thousands of Model 41's, in use for years, prove this true. The small compact size makes it ideal for use in modern lighting fixtures, as well as for FHP motors.

A new Levolier Model 71—This 6 amp 125 volt, "T" rated switch has a molded plastic case less than ½" thick. Pressure connected six inch wire leads provide fast, easy installation.

Available From Your Electrical Wholesaler

For McGill Catalog No. 49 write to McGill Mfg. Co., Inc., 151 N. Campbell St., Valparaiso, Indiana.

McGILL® Electrical Specialties

ONLY McGILL MAKES Levolier SWITCHES

For more details circle NED-2614 on enclosed inquiry slip

Pressure Reducing Costs

When You Use Masoneilan Regulators

You'll find thousands of Masoneilan Regulators in hundreds of plants giving accurate pressure reducing service in various types of application.

It stops "singing" and splashing from fixtures without cutting down flow . . . reduces strain on plumbing. Body Ratings: 150 psi . . . Reduced Pressure Ranges: sizes ¼" to 1" — 10-60 psi; sizes 1¼" to 2" — 10-40; 30-60 psi; size 2" — 15-40; 30-60 psi.

Also available for air service in sizes from ¼" to 1".

Your local Mason-Neilan industrial distributor is ready to serve you from his stock

MASON-NEILAN REGULATOR COMPANY

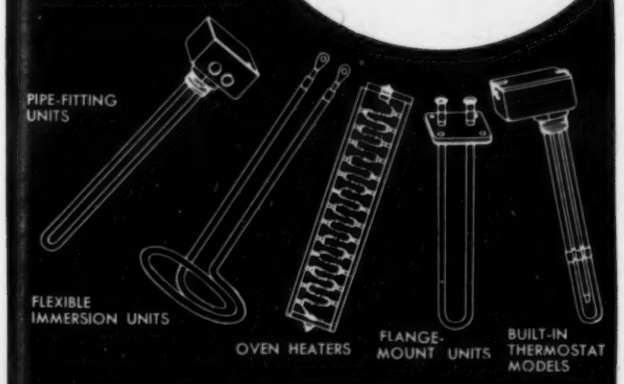
1189 ADAMS STREET, BOSTON 24, MASS., U. S. A.

For more details circle NED-2615 on enclosed inquiry slip

THERMALINK Electric HEATING ELEMENTS

OVER 600 STANDARD MODELS & TYPES

IMPROVE YOUR ELECTRICALLY HEATED PRODUCTS AND EQUIPMENT WITH THERMALINK ELEMENTS



SPECIALISTS IN CORROSION-RESISTANT IMMERSION HEATERS

Write Dept. N for Literature

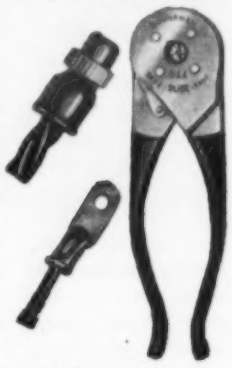
ELECTRO-THERM INC.

8024 GEORGIA AVE., SILVER SPRING, MD.

For more details circle NED-2616 on enclosed inquiry slip

ELECTRICAL SPLICING TOOL
has four-way crimping action

Capable of splicing all wire combinations from two No. 18 to three No. 8 and terminating wire sizes from No. 16 to No. 8, this C22 Pres-Sure tool is designed for making solderless electrical connections. It replaces Nos. S10 and S11; and its crimping action is equally effective on solid, stranded or combinations of solid and stranded wires. Tool can be used also for installing illustrated solderless Termend lugs and Nos. 2004 and 2011 splice caps. It is 8 in. long, weighs 1 lb and has easy-grip handles protected with vinyl tubing. Tool is used in same manner as pliers. Made by **Buchanan Electrical Products Corp.**, 1292 Central Ave., Hillside, N. J.



For more details circle NED-2617 on enclosed inquiry slip

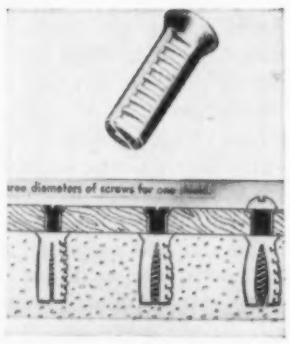
ELECTRIC TYPEWRITER
features reduced key resistance

Key resistance of improved Electri-conomy electric typewriter has been reduced to 2½ oz for easier operation. Other improvements include one-space tabulation, governor controlled tab-key carriage return for wide tabulations, faster space bar operation and fully insulated rubber feet which reduce machine sound and slippage. Machine has chip-resistant gray wrinkle finish, black plastic keys with injection molded characters that will not wear off, and black plastic operating levers and platen knob that resist marking and staining. Made by **Remington Rand, Inc.**, Dept. NED, 315 Fourth Ave., New York 10, N. Y.

For more details circle NED-2618 on enclosed inquiry slip

WOOD SCREW ANCHOR
accommodates various screw sizes

Especially designed for anchoring wood screws in brittle materials such as glass, tile, cement and masonry walls, Multi-Diameter lead alloy anchor employs combination of force of descending screw and screw radial thrust which creates sidewise shearing action. Center of anchor is tapered rectangular hole to accommodate various sizes of screws. With larger diameter screws, holding power is greater as result of extreme sidewise pressure against fins and extra flowing action of lead anchor into irregular surfaces of hole-wall. Made by **U. S. Expansion Bolt Co.**, 620 State St., York, Pa.



For more details circle NED-2619 on enclosed inquiry slip

CUT PAINTING COSTS Right Down the Line— WITH Gold Stripe BRUSHES!

Paint brushes are tools, too! And quality tools do the best job—last longer—take less effort—cost less in the long run. That's why you should use Pittsburgh *Gold Stripe* brushes.

From business end of top-grade, *pure* bristle to tip of fine hardwood handle, they're designed by master craftsmen under job-tested conditions. LIFE SAVER jacket keeps brushes straight, lively and clean longer.

See your supplier or contact nearest Pittsburgh branch for information and prices. PITTSBURGH PLATE GLASS Co., *Brush Division*, Dept. M-4, 3221 Frederick Avenue, Baltimore 29, Maryland.

PITTSBURGH Gold Stripe BRUSHES

BRUSHES • PAINT • GLASS • CHEMICALS • PLASTICS

PITTSBURGH PLATE GLASS COMPANY

For more details circle NED-2620 on enclosed inquiry slip

Engraving

Here is the most versatile machine...So simple to operate by unskilled labor.

PROFILING VERTICAL MILLING

NEW HERMES Engravograph

This heavy duty bench type model covers a larger engraving area than any other machine of its kind.

NEW HERMES, Inc.

Dept. #26 13-19 UNIVERSITY PL. • NEW YORK 3

World's Largest Manufacturer of Portable Engraving Machines

For more details circle NED-2621 on enclosed inquiry slip

NEWARK

DESIGN and PRODUCTION of WOVEN WIRE PARTS

NEWARK ACCURACY

Why not allow us to do a "from start to finish" job on your fabricated wire cloth parts? What do we propose to do? Assist you with the design, set up the necessary tooling, make the wire cloth . . . it's the well known Newark Wire Cloth long noted for its accuracy and durability . . . and do all the necessary cutting, stamping, punching, welding, soldering, seaming and bending. We deliver to you a finished product in any quantity desired. We are equipped to handle your requirements on a quantity production basis. May we quote on your next requirements?

* * *

We also manufacture a complete line of industrial wire cloth in all commercial malleable metals.

Newark Wire Cloth COMPANY

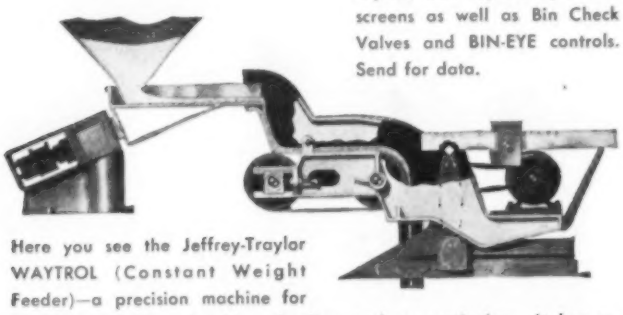
4-NWC-7

332 VERONA AVENUE • NEWARK 4, NEW JERSEY

For more details circle NED-2622 on enclosed inquiry slip

Positive Control Over Tonnage Handled

Electric Vibrating FEEDERS — small ones and large ones — for feeding from a few ounces up to many tons per hour. Pan or tubular types with hundreds of applications in processing various kinds of material. Also electric vibrating coolers, dryers, conveyors, packers, screens as well as Bin Check Valves and BIN-EYE controls. Send for data.



Here you see the Jeffrey-Traylor WAYTROL (Constant Weight Feeder)—a precision machine for accurate weighing, batching, feeding and proportioning. It has an "electric brain". Find out about it.

JEFFREY

THE JEFFREY MANUFACTURING CO.
952 Fourth St., Columbus 16, Ohio

▲ For more details circle **NED-2625** on enclosed inquiry slip ▲

How Production-Wise Manufacturers SAVE SANDING COSTS

FINISHING METAL

This manufacturer of automatic dishwashers, dissatisfied with other abrasives, switched to AP's No. 80 Jewelox Cloth X73. Now reports: "This cloth is the best we've ever used!"

FINISHING PLASTICS

This manufacturer called in AP Engineers on problem of finishing plastic switch plates. Cool-running AP Silver Streak Belts were recommended. Result: Silver Streaks did 25% more work than other belts — eliminated spoilage — cost not a penny more.

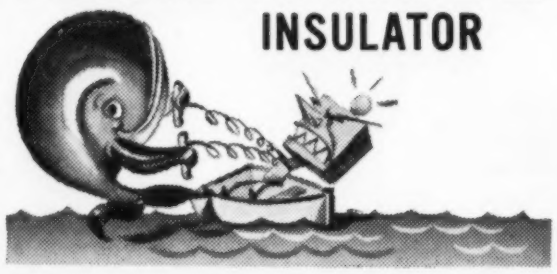
Have *you* got a finishing problem? Ask your distributor about AP Jewel Coated Abrasives or write us today!

Abrasive Products, Inc.

SOUTH BRAINTREE 85, MASSACHUSETTS · MAKERS OF JEWEL COATED ABRASIVES

▲ For more details circle **NED-2626** on enclosed inquiry slip ▲

SYNTHANE is a Whale of an INSULATOR



Synthane laminated plastics have a *combination* of superior electrical qualities that may make them just the materials you've been seeking to make your product better.

One advantage is excellent electrical insulating ability. Others are high dielectric strength, low dielectric constant and low power factor. Together with Synthane's light weight, ease of machining and good mechanical and chemical characteristics, they make Synthane a valuable material for many applications in almost every industry.

If your present materials are in any way unsatisfactory and your quality standards are high it may pay you well to find out more about Synthane. For your copy of the Synthane catalog, clip and mail the coupon today.

TECHNICAL PLASTICS
SHEETS • RODS • TUBES
FABRICATED PARTS

SYNTHANE

MOLDED - LAMINATED
MOLDED-MACERATED

SYNTHANE CORPORATION
North East River Road, Oaks, Pa.
Please send me a copy of the complete Synthane catalog.
Name_____
Firm_____
Address_____
City_____ State_____

▲ For more details circle **NED-2627** on enclosed inquiry slip ▲

METAL CUTOFF BAND SAW cuts at 40, 100, 175 and 300 fpm

Capable of cutting all shapes and types of metals, model 612 metal cutoff band saw handles up to 6-in. round and 6 x 12-in. rectangular stock. Supplied with ½-hp motor and Timken roller bearing equipped transmission, machine employs ⅝ x 0.032-in. blade. Cooling system attachment can be installed quickly.

Saw is constructed of semi-steel castings and alloy steel and has cast aluminum safety guards. Open construction provides easy access to work, and Microset stock stop facilitates setting and precision sawing. Since band wheels lie on surface of blade frame, blade can be changed merely by dropping new blade over wheels and adjusting tension. Made by **Famco Machine Co.**, 1343 Eighteenth St., Racine, Wis.

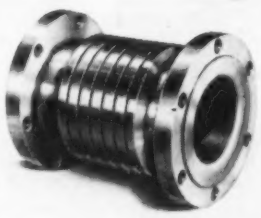
▲ For more details circle **NED-2628** on enclosed inquiry slip ▲

PRESSURE SAMPLE CONTAINER available in two pressure ranges

Usable for either production run or laboratory sampling, this stainless steel pressure sample container can be obtained in pressure ranges of 400 and 1800 psi. It is ICC approved and can be furnished for either single or double valving. Standard construction is 18-8 stainless steel, but container can be furnished in other ferrous or nonferrous metals on special order. Made by **Hoke, Inc.**, 149 S. Dean St., Englewood, N. J.

▲ For more details circle **NED-2629** on enclosed inquiry slip ▲

PIPELINE EXPANSION JOINT for 1000-psi working range



Axial, offset and radial motion control in high pressure piping systems is afforded by Flexoniflex line of expansion joints. They consist of corrugated bellows type sections of stainless steel or other alloys formed within integral control rings and end sections. Integral construction of control rings permits unit to withstand extremely high pressures.

Standard joints are made with single or multiple plies, can be lined or unlined and are available in sizes from ⅝-in. ID. Temperature range for stainless steel construction is from subzero to 1400° F, and this upper limit can be exceeded with use of special alloys. Made by **Chicago Metal Hose Corp.**, 1343 S. Third Ave., Maywood, Ill.

▲ For more details circle **NED-2630** on enclosed inquiry slip ▲

SPEED UP SMALL PARTS ASSEMBLY

Parts feed automatically toward front—end reaching and fumbling.

Bins taper toward front to form convenient semicircle —keep all bins within easy reach.

Stacking, locking construction for rigid set-ups, easily changed when necessary.

All-welded construction. Smooth, folded edges.

New-design, adjustable hoppers provide increased capacity and permit regulated flow of parts according to sizes and weights.

Two-sizes—tapered or straight sides.

IMMEDIATE DELIVERY

Manufactured and sold in Canada exclusively by Wickware-Stackbin, Ltd., Ottawa

Write Stackbin Corp., 1081 Main Street, Pawtucket, R. I.

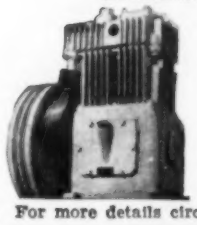
STACKBIN SYSTEM
"Stacked and Still Accessible"

▲ For more details circle **NED-2631** on enclosed inquiry slip ▲

HAVE YOU TRIED COMPRESSED AIR?

CALL IN A QUINCY COMPRESSOR SPECIALIST

He'll be glad to help work out solutions to production and manufacturing problems involving compressed air applications. Remember, Quincy Compressors provide air for *blowing, spraying, starting, lifting, braking, driving, chucking, filling,* and many more operations. Quincy builds air compressors *exclusively.* Depend on Quincy Compressed Air Specialists for help with your problems. Get details!



Quincy COMPRESSORS

QUINCY COMPRESSOR CO.
Dept. NE-40, Quincy, Illinois

▲ For more details circle **NED-2632** on enclosed inquiry slip ▲

Completely New!

An Entire Series of NEW, SMALL ROTARY SWITCHES By "Diamond H"

Series 240 Switches

Single Hole Mounting Model Shown
1 1/2" high x 1 1/4" wide x 1" deep
AND Attractive Bezel-equipped Models for snap-in mounting.

Both Types Available in These Circuits:

Series Parallel 3 heat 4 position, Double Pole
Series Parallel 3 heat 4 position, Single Pole
ON & OFF, Double Pole and Single Pole
OFF-ON (circuit 1) — OFF-ON (circuits 1 & 2) Double Pole, and Others.
15 A., 125 V., 7½ A., 250 V. A.C. Only
Underwriters' Laboratories Approved

NO OTHER SWITCH WILL GIVE YOU ALL THESE LONG-WANTED FEATURES

- *Compactness* — unmatched by any other switch.
- *Heat Resistance* — completely efficient operation with ambient temperatures up to 400°F.
- *Entirely Enclosed*—for safety's sake and protection of working parts.
- *High Overload Capacity* — ratings are conservative.
- *Proven Peak Performance* — thanks to long recognized "Diamond H" slow-break principle and heavy silver contacts.
- *Long Service Life* — because of ingeniously simple design and rugged construction.

Write today for complete details on "Diamond H" Series 240 Switches for your applications.

THE HART MANUFACTURING COMPANY
204 Bartholomew Ave., Hartford, Conn.

▲ For more details circle **NED-2633** on enclosed inquiry slip ▲

The "MASTER"® Line OF MATERIALS HANDLING EQUIPMENT

"Engineered to Save You Money"

Get This Latest L-S Bulletin Featuring Electric Power Fork Trucks

SEND FOR BULLETIN NO. 25

THE "MASTER" LINE ®

CUT COSTS WITH The "MASTER"® Line

SPACEMASTER Electric Trucks
SPACEMASTER Gas Trucks (Fork Types)
MASTER JACKSTACKERS
JACKLIFT ELECTRIC Trucks
MASTER JACKTRACTORS
MASTER JACKLIFT Trucks
MASTER QUICKLIFT Trucks
MASTER REDILIFT Trucks
MASTER SPEEDLIFT Trucks
POWERMASTER Stackers
SPEEDMASTER Stackers
FLOORMASTER Trucks
SHIPMASTER All-Steel 2-Wheel Trucks
WELDMASTER Platforms
LOADMASTER Racks

LEWIS®-SHEPARD PRODUCTS INC.
302 Walnut St., Watertown 72, Mass.
Midwest Plant: Crawfordsville, Ind.
Representatives in Principal Cities.

▲ For more details circle **NED-2634** on enclosed inquiry slip ▲

Good engineering — good design — highest quality materials . . . make Abart Speed Reducers a paying investment. It's an investment that pays off in quiet, trouble-free operation, power-saving economies, and extra-long, dependable service. We make more than 75 types of Reducers spur, worm, or combination—1/50 to 417 HP—ratios up to 1,000 to 1. Send *today* for our informative book on Abart Reducers, containing engineering data and drawings, and a complete list of Reducers available. It will help you solve your speed reducer problems!

Abart GEAR & MACHINE CO.

4822 W. 16th St. Chicago 50, Ill.

For more details circle NED-2635 on enclosed inquiry slip

*Trademark

Stocked at your industrial distributor

TO SIMPLIFY YOUR BUYING!

FROM his large stock, your local Industrial Distributor can give you prompt delivery of the right type of Osborn maintenance brush for *every* need. Why not take advantage of this handy, dependable supplier *for brushes,* as you do for other factory supplies!

When you specify *Osborn* on your purchasing records, you simplify your buying procedures and thereby *cut the time* of department personnel needed to handle such items. By specifying *Osborn,* you are *sure* you're buying unsurpassed quality in brushing tools . . . quality backed by over 58 years of Osborn factory skill and workmanship famous the world over.

For every requirement in brushing tools . . . maintenance brushes, paint brushes and power brushes . . . insist on OSBORN!

THE OSBORN MANUFACTURING COMPANY

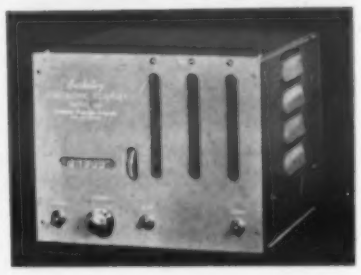
Dept. 274, 5401 Hamilton Avenue • Cleveland 14, Ohio

Osborn Brushes

WORLD'S LARGEST MANUFACTURER OF BRUSHES FOR INDUSTRY
POWER DRIVEN BRUSHES • PAINT BRUSHES • MAINTENANCE BRUSHES

For more details circle NED-2636 on enclosed inquiry slip

ELECTRONIC COUNTER
makes 10,000 counts per second of random or regular occurrences



Any electrical, mechanical or optical event that can be converted into changing electrical voltages can be counted by model 410 electronic counter. Minimum time between two randomly spaced events is 20 microseconds. Total number of counts for first 999 events is indicated by illumination of numbers on electronic decimal counting units. Next six digits are indicated on mechanical register. This gives total capability of a billion counts.

Device is composed of power supply; input amplifier-pulse former; one, two or three-decimal counting units; electronic relay unit and optional mechanical register. Counting is started and stopped either by manual switch or by electrical voltage. Electronic counting stages are reset by pushbutton or relay. Mechanical register is reset by thumb wheel. Voltages are supplied at input connector socket for mechanical contacts and photocell. Input circuit is also provided so that pulses of any wave form can be counted. By simple internal connection, outputs can be obtained after 10, 100, or 1000 counts. Power input required is 105-125 v, 50-60 cycles. Made by **Berkeley Scientific Co.,** Dept. DCU-701, Sixth & Nevin Ave., Richmond, Calif.

For more details circle NED-2637 on enclosed inquiry slip

ELECTRON TUBE TESTER
made in portable and counter types

Radio, television, mobile transmitting and industrial electron tubes can be tested accurately and thoroughly by model 220 portable and 219 counter type testers. Features include ohmmeter type shorts and leakage test which indicates "replace" or "good" directly on illuminated meter, direct meter indication for all other tests, easily operated gas test, and combined emission and trans-conductance test under dynamic operating conditions which takes relative tube life into account. Twelve sockets provide for testing 4, 5, 6, 7, 8 and 9-pin tubes; octal and lock-in types; miniatures; subminiatures; acorn and hearing aid types; mobile and ruggedized tubes and pilot lamps. Facilities for checking unannounced tubes are included. Control settings are shown on roller chart which is easily removable from front panel for adding new tube settings. Made by **Sylvania Electric Products Inc.,** Dept. JPW, 500 Fifth Ave., New York 18, N. Y.

For more details circle NED-2638 on enclosed inquiry slip

WELD

You Save Rewelding Costs by Using Arcos Stainless and Low-Alloy High-Tensile Electrodes

Arcos electrodes give you good, high quality welds, day after day, without the need for chipping and rewelding. That is because of the many rigid quality control inspections made during manufacture. And you can always pick the right electrode to give you the results you want from Arcos' complete line.

Arcos manufacturing processes are geared to the production of high quality electrodes to meet the exacting requirements of welding stainless and low-alloy high-tensile steels, as well as non-ferrous metals.

Try an Arcos electrode on your next stainless or alloy welding job and measure your savings in less rewelding. All standard types and sizes available from nearby distributor stocks.

ARCOS CORPORATION
1500 South Fiftieth St. Philadelphia 43, Pa.

WITH ARCOS

For more details circle NED-2639 on enclosed inquiry slip

When the Heat's on . . . R & M HOISTS DELIVER

Moving upwards of 350 tons of molten metal per day from furnace to flask, nine 2-ton R & M hoists boost production of a large foundry in Ironton. Although operating only 5 feet above the searing heat of tapped furnaces, these hoists require little maintenance. They're rugged enough for the toughest tasks. There's an R & M hoist or crane for your operation.

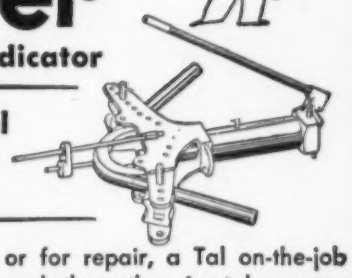
Capacities: ¼ to 25 tons. Write for free literature.

ROBBINS & MYERS, INC.
HOIST & CRANE DIVISION, SPRINGFIELD 99, OHIO

For more details circle NED-2640 on enclosed inquiry slip

A Tal Bender

with new *bend* indicator



Easy does it with a Tal

No training required

For original installation or for repair, a Tal on-the-job bender does in seconds work that otherwise takes many minutes. Because a Tal repays its cost so quickly, and does it time and again; thousands are in use everywhere. Write today for factual bulletin.

Tal Bender, Inc. Dept. NED-4 Milwaukee 2, Wis.

For more details circle NED-2641 on enclosed inquiry slip

SHAKEPROOF "SPEED NUTS"*

Simplify Assembly

AND REDUCE COSTS!

SEND FOR *Free Test Kit* AND PROVE IT TO YOURSELF!

Shakeproof "Speed Nuts" increase speed of assembly, ease of application and resistance to vibration loosening —three important phases of greater fastening efficiency. Light-weight, Flat Type "Speed Nuts" replace ordinary nuts; U and J Type "Speed Nuts" are self-retaining, perfect for blind and hard to reach fastening points; Latching Type is self-retaining at mid-panel locations. Test and try Shakeproof "Speed Nuts" on your own product. Write for free Sample Kit No. 30 today.

*T.M. Reg. U.S. Pat. Off. by Tinnerman Products, Inc.

SHAKEPROOF inc.
"Fastening Headquarters"
DIVISION OF ILLINOIS TOOL WORKS
2501 North Keeler Avenue, Chicago 39, Illinois

For more details circle NED-2642 on enclosed inquiry slip

VEMCO DRAFTING MACHINES

Designed by Engineers for Engineers

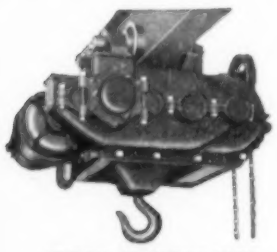
1. *Convenient thumb-action indexing for every 15°.*
2. *Simple and positive band tightening device.*
3. *Flexibly articulated arms for easy head movement and flat-lying scales.*

THE engineers responsible for the design of VEMCO Drafting Machines are thoroughly familiar with drafting problems. VEMCO Machines incorporate ALL the facilities desired by the engineer to fill his exacting needs. ★ The VEMCO offers smooth, effortless movement . . . positive setting and control for speed and accuracy. . flexibility for convenient operation . . . elimination of an awkward assortment of drafting tools . . . sturdy construction for durability. ★ VEMCO Drafting Machines are finished in blue-green metallic color for eye comfort. ★ Ask your VEMCO dealer for a demonstration or write today for illustrated catalog covering drafting machines and drawing instruments.

V&E MANUFACTURING CO.
PASADENA 2, CALIFORNIA

▲ For more details circle **NED-2643** on enclosed inquiry slip ▲

NORTHERN HI-LIFT HEAVY DUTY HOISTS



FLOOR CONTROL TYPE

CAB CONTROL TYPE

SWIVEL TRUCK TYPE

ALSO STANDARD AND TRAMRAIL TWO-TRUCK TYPES

For safe, dependable handling of heavy loads in heavy-duty service, NORTHERN HI-LIFT HOISTS permit more diversified, general purpose use—wider adaptability to changing service demands.

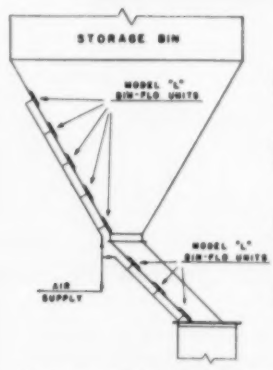
ASK FOR BULLETIN H-110

NORTHERN ENGINEERING WORKS, 2615 Atwater St., Detroit 7, Mich.

NORTHERN CRANES AND HOISTS

▲ For more details circle **NED-2644** on enclosed inquiry slip ▲

BIN-FLO

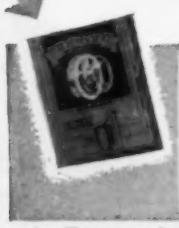


Provides STEADY FLOW of Bulk Materials

New aerating device provides uniform steady flow of most dry finely-ground materials from bins, hoppers, chutes, and silos.

BIN-FLO units are located at points of restricted flow. Low-pressure air supply may be controlled by BIN-DICATORS.

THE BIN-DICATOR COMPANY
14615 E. Jefferson Avenue Detroit 15, Michigan



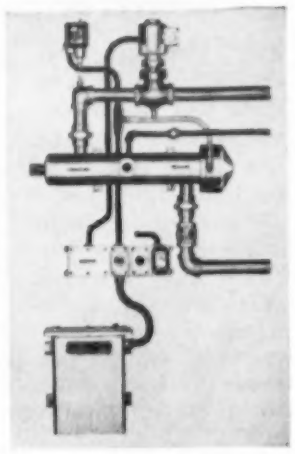
Please send new 20-page catalog giving complete information and specifications on BIN-DICATORS. Also please send information on BIN-FLO Aerating Units.

Name_____
Address_____
City_____ State_____

D-3

▲ For more details circle **NED-2645** on enclosed inquiry slip ▲

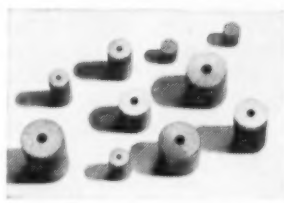
WATER STERILIZER does not change taste of water



Constant purity of water is obtained by use of Steritron water sterilizer without addition of chemicals. Taste and physical structure of water remain unchanged as germicidal lamp is used. Completely automatic in operation, unit offers efficient method of continuous rapid flow sterilization at relatively low operating cost. Sterilizer can be furnished for operation on 110, 220 and 440 v; 50, 60 or 25 cycles. Made by **Hanovia Chemical & Mfg. Co.**, Germicidal Lamp Div., 100 Chestnut St., Newark 5, N. J.

▲ For more details circle **NED-2646** on enclosed inquiry slip ▲

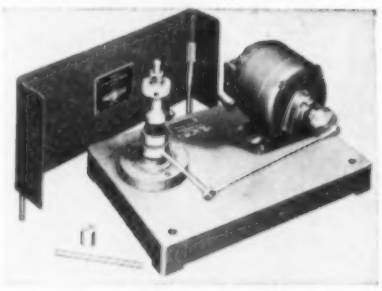
HEADER DIE NIBS have high shock and wear resistance



Made of cemented carbide, die nibs for heading bolts and screws are available in 17 sizes ranging from those of 9/16-in. OD, ¾-in. long and having cored hole size of 0.060-in. to those of 1¼-in. OD, 2⅛ in. long and having cored hole size of 0.330-in. Seven smaller sizes are stocked in Carboloy grade 55B and ten larger types are in grade 190. Die nibs are furnished from stock in rough cored form. Made by **Carboloy Co.**, 11163 E. Eight Mile Rd., Detroit 32, Mich.

▲ For more details circle **NED-2647** on enclosed inquiry slip ▲

OSCILLATING GREASE TESTER for antifriction bearing lubricants



Properties of lubricants intended for use on antifriction bearings which are normally at rest but which oscillate through small angles in application can be evaluated by this oscillating grease tester. Test grease is applied to simple lever which exerts thrust through calibrated spring. Electric motor oscillates test bearings through 12-degree angle at rate of 3450 reversals per minute under thrust load of 550 lb. Test is run continuously for 50 hours before bearings are weighed and washed again. Loss of weight in milligrams shows suitability of lubricant.

To dampen noise and vibration, tester is rigidly mounted on 1¾-in. steel plate base. Rated at ⅓-hp, motor operates on 115 v, 60 cycles. Made by **Precision Scientific Co.**, 3735 N. Cortland St., Chicago 47, Ill.

▲ For more details circle **NED-2648** on enclosed inquiry slip ▲

Only HEIN-WERNER HYDRAULIC JACKS have all these features . .

★ **PLANT MAINTENANCE MEN FIND 1001 USES FOR H-W JACKS**

Great for pushing, pulling, pressing, bending, lifting heavy objects. Made in models of 1½, 3, 5, 8, 12, 20, 30, 50 and 100 tons capacity.

For details, consult your industrial distributor, or write us.

Hein-Werner HYDRAULIC JACKS

HEIN-WERNER CORP.
WAUKESHA, WIS.

▲ For more details circle **NED-2649** on enclosed inquiry slip ▲

K-P *Spiral Woven Wire* CONVEYOR BELTS

Made in suitable metals and mesh sizes for conveying, material handling, processing and heat treating. Particularly well adapted to the food industries where free circulation of air and drainage are required. K-P Flextrough Belts with flanged edges prevent small parts from rolling off the belt. Side chains provided for sprocket drive. Complete special purpose conveyors designed and manufactured.

KORB-PETTIT
Wire Fabrics & Iron Works Inc.
Engineers and Manufacturers

1501 N. Mascher St.
Philadelphia 22, Pa.

Wire Mesh, Spiral Woven Wire Conveyor Belts, Infra-Red Conveyor Dryers, Leather Finishing and Drying Machines, Industrial Wire Partitions, Machine and Window Guards, Cages, Enclosures, Grilles, etc.

▲ For more details circle **NED-2650** on enclosed inquiry slip ▲

what shape's it in?

Pulls and handles, guides and rails, strips and slides, edgings and moldings — from decorative trim to mechanical parts, no matter what shape it's in we make it — for shapes are our business. In our modern plant we make aluminum extruded shapes — fabricated, anodized, given a silvery satin or gleaming polish finish*, and delivered ***ready for assembly*** in our customers' products in many fields. Think about it ***now:*** How can we help ***you*** make better products cheaper by using LMC fabricated aluminum extrusions? Write today for recommendations and cost estimates. Just send us a blueprint or sketch — we'll do the rest. There's no obligation!

cut tooling costs

When they're LMC aluminum extrusions, there's no need to let tooling costs freeze your designs. You'll be pleased, and perhaps amazed, to learn how inexpensive our die work is.

shapes that work

** Alumilite licensee — clear and color anodizing — chemical brightening.*

LIGHT METALS *corporation*
GRAND RAPIDS, MICHIGAN

▲ For more details circle **NED-2651** on enclosed inquiry slip ▲

MATERIALS HANDLING EQUIPMENT

tough enough for ANY job!

lightweight, hard, vulcanized fibre

TRUCKS & TOTE BOXES

Built by men who know,—with *extra* protection to continual usage, available in ALL sizes. Note the "ironclad" corners; reinforced rims. Hardwood runners on tote boxes, triple protection on trucks. Send for catalog showing many types, sizes and uses. .

USED BY INDUSTRIALS EVERYWHERE! "SINCE 1898"

"BAL" RUGGED WITH A CONSCIENCE

WILLIAM BAL CORPORATION
11 Johnson Street, Newark 5, N. J.

▲ For more details circle **NED-2652** on enclosed inquiry slip ▲

ARCCO NEVER-DRY PEN

Writes for Months

REPLACES OTHER MAKES • USES REGULAR INKS

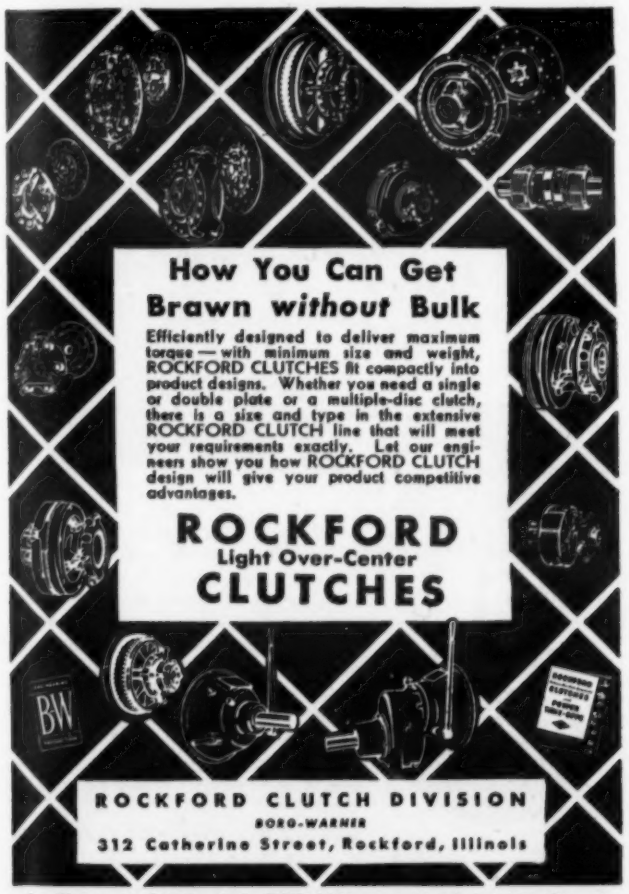
Regardless of pulsations or other causes of ink failures this new Never-Dry Pen will make clean and complete records. Ink supply lasts for several months without refilling reservoir. Capillary tube from ink bottle placed in instrument case feeds pen with continuous flow. Closed system sealed from atmosphere prevents clogging and dirt accumulation.

Weight of pen is constant at all times thus insuring extreme accuracy. No slopping or dripping. Stainless steel construction—no corrosion. When ordering, specify make and type of recording instrument.

AMERICAN RECORDING CHART CO.
3113 E. 11th St. • Los Angeles 23, Calif.

$6.00 each Net
Send for quantity prices

▲ For more details circle NED-2653 on enclosed inquiry slip ▲



▲ For more details circle NED-2654 on enclosed inquiry slip ▲

Firms everywhere using the Dempster-Dumpster system report tremendous savings in materials handling costs. One plant saves more than $70,000 annually; another saves $50,000, in scrap and trash handling alone. Quick pick-up, hauling and dumping of detachable containers makes one Dempster-Dumpster truck hoisting unit worth 5 to 10 conventional trucks. One man (the driver) and a truck handle any number of standard or special containers, 3 to 10 cu. yds. . . built to handle any type of material. Illustrations from top to bottom show typical pick-up, hauling, and dumping operations. Write for catalog 247 today.

DEMPSTER BROTHERS, Inc.
440 N. KNOX
KNOXVILLE, TENNESSEE

▲ For more details circle NED-2655 on enclosed inquiry slip ▲

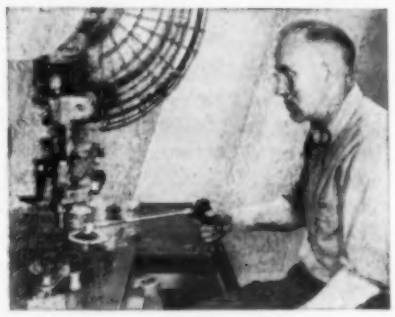
POWER PLANE
maximum cutting width is 1-13/16 in.

Built with hardened steel cutter, model 101 Guild plane operates at speed of 20,000 rpm to assure clean cut, leaving smooth waveless surface. Adjustable apron permits bevel cuts from 0 to 25 degrees. Weighing only 8 lb, plane is easy to handle in any position. Interchangeable 115-v universal motor can be transferred quickly to recently announced Guild router.

As leveling plane, tool levels stock and planes accurate edges for joints or finished work. With shaper bench stand, it can be converted into shaper-jointer to make molding strips and contoured edges. For all jointer work, spiral cutter gives dead-level edges for flush joints or finished work. When spiral cutter is replaced by shaper cutters, unit serves also as portable molding plane. Made by **Porter-Cable Machine Co.**, 1710 N. Salina St., Syracuse 8, N. Y.

▲ For more details circle NED-2656 on enclosed inquiry slip ▲

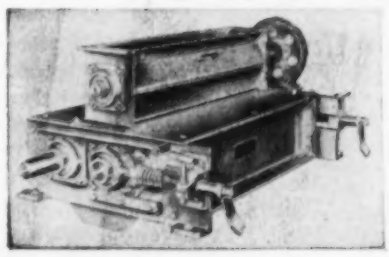
PUNCH PRESS FEEDER
assures safety to operator's hands



Employing vacuum produced by passing compressed air through venturi, improved Pres-Vac safety feeder (*NED June* '48) hand feeds small parts in position for further stamping operations. Pistol grip and trigger control are features. Operator's hands are never put under ram. Made by **F. J. Littell Machine Co.**, 4169 N. Ravenswood Ave., Chicago 13, Ill.

▲ For more details circle NED-2657 on enclosed inquiry slip ▲

PELLET CRUMBLIZING UNIT
usable with any pellet mill system



Uniform distribution of material is assured in model 100 pellet crumblizer by roll type feeder which spreads pellets evenly over entire roll surface. Fines production is kept to minimum.

When 6 x 32-in. crumble roll equipped with antifriction bearings and V-belt drive is used as integral part of Junior pellet mill system, roll type feeder is not necessary because cooling hopper distributes pellets evenly over rolls. Same size crumble roll with special 2¾-in. feed roll but without drive is suitable for use with Simplex '49 model or other makes of pellet mills. Made by **Sprout-Waldron & Co.**, 179 Sherman St., Muncy, Pa.

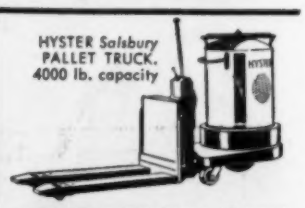
▲ For more details circle NED-2658 on enclosed inquiry slip ▲

HYSTER
Salsbury
Turret Trucks
FOR HORIZONTAL MATERIALS HANDLING

HYSTER *Salsbury* PLATFORM TRUCK. 4000 lb. capacity.

HYSTER *Salsbury* CARGO TRUCK. 4000 lb. capacity

HYSTER *Salsbury* TUG. 15,000 lb. towing capacity



HYSTER *Salsbury* PALLET TRUCK. 4000 lb. capacity

- ✓ **Fully Automatic Clutch and Transmission.** No gear shifting, no levers.
- ✓ **Throttle Ring** — press it and the truck moves.
- ✓ **Turns In Its Own Length.**
- ✓ **Economical To Run.**
- ✓ **Low Initial Cost.**
- ✓ **Available in Various Sizes.**

HYSTER *Salsbury* Turret Trucks are *low cost horizontal transporters* for any type of load up to 4000 lbs. Hundreds in use. Sold and serviced by Hyster dealers all over the world. Ask for a demonstration or write for new Turret Truck catalog just off the press.

HYSTER COMPANY

Three Factories
2906 N.E. Clackamas, Portland 8, Oregon
1806 North Adams St., Peoria 1, Illinois
1010-06 Meyers Street, Danville, Illinois

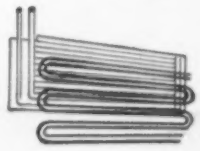
▲ For more details circle NED-2659 on enclosed inquiry slip ▲

Replaces Pipe Coil

LESS MAINTENANCE

Weighs less than half as much as equivalent pipe coil. Platecoil is easy to handle. Installation can be made in ½ hour by one man and a helper.

MORE PRODUCTIVE CAPACITY



Platecoil has more prime surface per sq. ft. of area than pipe coil, heats faster, and leaves more tank space for production work.

NO LOSS OF SOLUTION

Platecoil can be removed from outside of tank in a matter of minutes without dumping. All connections above liquid level.

PLATECOIL
Division
KOLD-HOLD MFG. CO.
LANSING 4, MICHIGAN

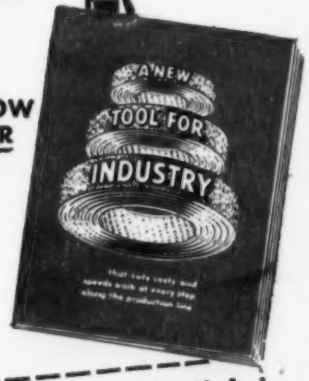
Write Today For New Free Bulletin No. P57

▲ For more details circle NED-2660 on enclosed inquiry slip ▲

HOW TAPE HELPS INDUSTRY SAVE TIME, CUT COSTS...

SEND FOR FREE BOOKLET! SHOWS HOW TAPE CAN HELP IN YOUR BUSINESS Whatever your business, chances are you'll find the facts, figures and pictures in this 12-page booklet will help you cut costs!

Just fill out the coupon —and mail it *today*—to the address below for your copy.



INDUSTRIAL TAPE CORP. NEW BRUNSWICK, N. J.

NAME..... (PLEASE PRINT)

TITLE.....

COMPANY.....

ADDRESS.....

CITY..... STATE..... DEPT. 5A

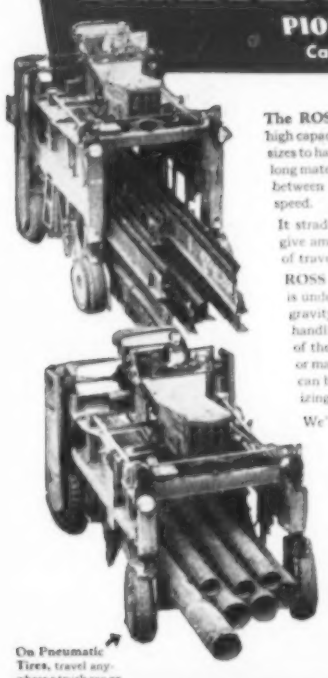
Permacel®
INDUSTRIAL TAPES
INDUSTRIAL TAPE CORPORATION • NEW BRUNSWICK, N. J.

▲ For more details circle NED-2661 on enclosed inquiry slip ▲

PNEUMATIC TIRED... STRADDLE CARRIERS

PIONEERED BY ROSS

Capacities: 1 to 12 Tons



The ROSS Straddle Carrier Truck, with high capacity tire equipment, is made in several sizes to handle all kinds of heavy, bulky or extra long materials or products . . . within buildings, between buildings or over the road at truck speed.

It straddles the load, lifts it just enough to give ample ground clearance for all conditions of travel.

ROSS Straddle Carriers are safer. The load is underslung, has an extremely low center of gravity; consequently the safest method of handling. Load is confined between the sides of the carrier, cannot roll off the sides. Loads or materials too long for other types of vehicles can be balanced centrally in the carrier, equalizing overhang.

We'll be glad to confer with you on your material and product handling problems.

ROSS FORK LIFT Trucks will handle your HEAVY LOADS. Capacities up to 9 tons.

On Pneumatic Tires, travel anywhere a truck can go.

ROSS HEAVY LOAD STRADDLE-CARRIERS & LIFT TRUCKS

ROSS CARRIER COMPANY • Benton Harbor, Michigan

Branches: Seattle • Portland • San Francisco • Vancouver, B.C. • New York City • Hoboken, N. J.

For more details circle NED-2663 on enclosed inquiry slip

Make Your Presses A-U-T-O-M-A-T-I-C

• BOOST PRODUCTION • CUT COSTS • PROTECT WORKERS

LITTELL AUTOMATIC Roll Feeds

SAFE ... Even at Lowest Labor Levels

LITTELL Rack and Pinion Roll Feed (illustrated) with automatic centering Reel. Also LITTELL Single and Double Roll Feeds to fit any make or size press, either open-back inclinable or straight sided.

Write for Catalog

F.J. Littell MACHINE CO.

4169 RAVENSWOOD AVENUE, CHICAGO 13, ILL.

For more details circle NED-2664 on enclosed inquiry slip

FREE BULLETIN

describes Simplex-TIREX PORTABLE CORDS

via GraybaR

Looking for a portable cord or cable that's really tough? One that will stand up under hard service conditions? Then look to Simplex-TIREX, for only TIREX cords and cables are protected by Selenium Neoprene Armor, cured-in-lead.

And to get the facts, send for this free, eight page bulletin. It describes in detail the "cured-in-lead" process . . . tells why it gives Simplex-TIREX cords and cables distinct advantages over other types. Also describes the way markings are molded right on the jacket so that even under hard service these molded markings will not rub off.

To get your free copy fill in and mail the coupon today

5025B

Graybar Electric Co., Inc.
420 Lexington Ave.
New York, N. Y.

GraybaR

Please send me the free bulletin describing Simplex-TIREX Portable Cords.

Name _____ Title _____

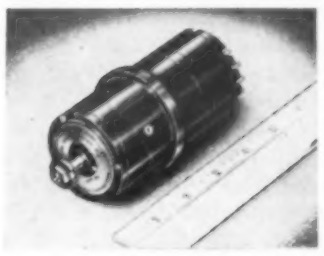
Company _____

Address _____

City _____ Zone _____ State _____

For more details circle NED-2665 on enclosed inquiry slip

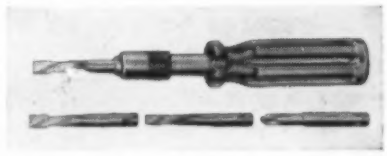
INDUCTION POTENTIOMETER can be used in computing machine



Capable of handling electrically all functions except the angle, type 1A400 or 1B400 induction potentiometer can be used in computing without introducing gear error, backlash or spring. First type requires use of booster amplifier, but second unit operates without one. Instrument is high precision 400-cycle signal transformer having ratios that can be varied continuously between fixed minus and plus values by mechanical rotation of projecting shaft. Features include isolated circuits, absence of common leads, high mechanical accuracy, small friction torque and self-contained terminal blocks. Made by **Arma Corp.**, 253 36th St., Brooklyn 32, N. Y.

For more details circle NED-2666 on enclosed inquiry slip

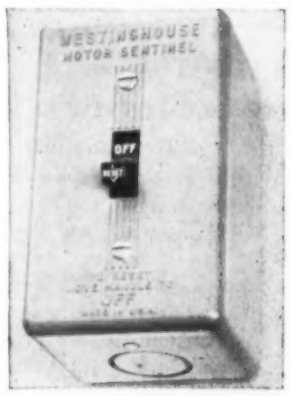
MULTIPLE BIT SCREWDRIVER features magazine loading blades



Quick changes from one bit to another are possible with this Selecto Three-in-One screwdriver. Three bits, two of which are in handle, permit its use for round, flat, and Phillips-head screws. Handle is nonbreakable amber-colored plastic, and rustproof bits are heat treated steel. Tool is 7½ in. long and weighs 6 oz. Made by **Selecto Products Co.**, 741 Superior Ave. N. W., Cleveland 13, O.

For more details circle NED-2667 on enclosed inquiry slip

MANUAL MOTOR STARTER has thermal overload protection



Especially suited to controlling and protecting up to 1-hp motors, Motor Sentinel manual starter with positive bimetallic overload protection fits any standard 2½-in. wall box. With front-removal heater of proper rating, unit permits time delay for starting and allows motors to carry overloads up to their safe capacity without disconnecting them from line. Positive operation is assured by over-center toggle mechanism. Contacts are double-break silver, and parts are copper alloy or plated steel. For surface mounting, unit is available in alloy enclosure with Bonderized baked enamel finish. Special cast-iron enclosures are obtainable for watertight and explosionproof applications. Made by **Westinghouse Electric Corp.**, P. O. Box 2099, Pittsburgh 30, Pa.

For more details circle NED-2668 on enclosed inquiry slip

STOW presents a NEW portable POWER TOOL

STOW JIFFY TOOL

• GRINDS • BUFFS
• FILES • SANDS
• DRILLS • ROUTS
• POLISHES • BRUSHES

$57.40 For more exacting requirements, the STOW 3-SPEED JIFFY does all the above jobs. SPEED RANGE: 1000-1750-3000 R.P.M.

Yes, the Stow Jiffy Tool does **all** these jobs . . . at a constant 1750 R.P.M. And this new portable machine is priced so low that no tool room, garage or shop need do without one!

Order Today $44.90

Write Today for Literature on STOW JIFFY TOOLS!

STOW MANUFACTURING CO.
26 Shear St. Binghamton, N. Y.

For more details circle NED-2669 on enclosed inquiry slip

MERRILL LIFTING CLAMPS

THE HEAVIER THE LOAD THE TIGHTER THE GRIP!

Safer and Speedier Lifting at Less Cost... have made MERRILL-Volz LIFTING CLAMPS the choice of large Steel Mills everywhere.

SAFER
• Safety factor of 5 to 1.
• Factory tested at double rated capacity.

GREATER SPEED AT LESS COST
• Entirely Drop Forged and Heat Treated.
• Working parts entirely enclosed.
• Pins do not rotate in frame eliminating wear.

Available in Stainless Steel

Sold by Better Distributors Everywhere.

MERRILL BROTHERS

66-13 Arnold Ave., Maspeth, N. Y.

FINE FORGINGS SINCE 1868

Producers of DROP FORGED SHACKLES, CLEVIS NUTS, TURNBUCKLES & EYE BOLTS.

Write for new CATALOG 10

For more details circle NED-2670 on enclosed inquiry slip

HERE'S HOW TO REDUCE YOUR TOP-HEAVY V-BELT INVENTORY

• Four reels of Veelos, the adjustable v-belt, can *replace* up to 316 sizes of endless v-belts—in the O, A, B and C widths. You may not use all these widths. If not, one or two reels of Veelos may be enough.

Veelos is easy to install without dismantling outboard bearings. It runs true—delivers steady, full, vibrationless power. It cuts down on machine maintenance because uniform tension can be maintained on all belts.

VEELOS THE LINK V-BELT

Adjustable to any length
Adaptable to any drive

WRITE FOR YOUR COPY of the Veelos Data Book. It gives complete engineering, measuring and installation information on Veelos v-belts.

MANHEIM MANUFACTURING & BELTING CO.
650 Manbel St., Manheim, Pa.

For more details circle NED-2671 on enclosed inquiry slip

THE MATEER ELECTRIC FILLER HANDLES THEM ALL!

LIQUIDS • OILS • POWDERS • PASTES

Fast and Accurate from 1/500 oz. to 2 pounds!

NO OTHER MACHINE COVERS THIS RANGE OF PROPORTIONING AND FILLING

Totally enclosed, manual or automatic. Accuracy as close as ± ½%. Synchronize this self contained filling head with existing production lines and processing systems.

Jacketed and electrically heated hoppers available for handling cold and hot materials up to 750° F.

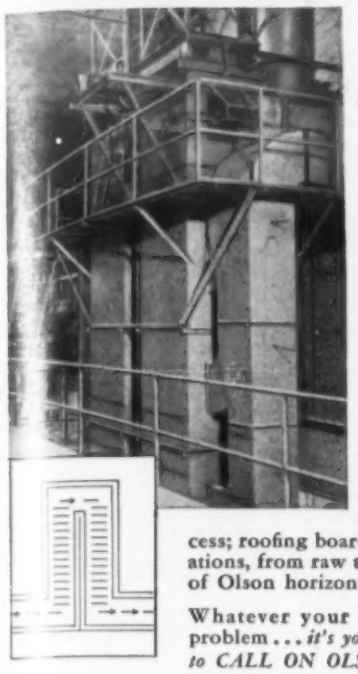
Hot waxes, insulating compounds and asphalts handled without difficulty.

Send full information and samples of material to be tested. Write Dept. 105 for fully illustrated bulletin.

G. DIEHL MATEER & CO.
Lincoln Highway • Devon, Pa.

For more details circle NED-2672 on enclosed inquiry slip

OLSON CONVEYORS



STEP UP EFFICIENCY

●

CUT DOWN COSTS

●

Switch from expensive, often duplicate, manhandling to the smooth, economical *continuous material flow* of Olson Conveyors. Custom designed to meet your particular problem.

EXAMPLE: Olson Conveyor does double duty in building material plant. In completely automatic process; roofing boards pass through three operations, from raw to finish—on a combination of Olson horizontal and vertical Conveyors.

Whatever your industry, whatever your problem . . . *it's your move to better production to CALL ON OLSON.* DO IT TODAY.

SAMUEL OLSON MFG. CO., INC.

2425 Bloomingdale Ave • Chicago 47, Illinois

For more details circle NED-2673 on enclosed inquiry slip

PORTER-CABLE ABRASIVE BELT MACHINING

Does More Surfacing Jobs *Faster* and *Better*

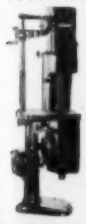
Features high speed cutting by millions of abrasive points imbedded in a continuous belt, cooled and cleaned by water and other coolants. Does close tolerance work on flats, squaring, cylindrical surfacing; deburrs, knocks off corners, forms radii, bevels and other operations. Often does milling, shaping, grinding operations 10 times faster—saves 75-90% setup time.

AUTOMATIC FEED

Model BG-8 (with automatic feed table). A precision surfacing machine for repeat operations. Eliminates expensive fixtures. 8" wide belt works on entire areas at once. Quickest method on interrupted areas.

FINAL FINISH

Model WG-4. For production runs on small parts, fed freehand or by simplest fixtures. Gives final finish to jobs done on automatics, band and hacksaws, lathes, milling machines, etc. Grinds carbide tipped tools.



PLATEN OR FREE BELT

Model B-6W. Quickly adaptable to flat, curved or irregular pieces. Various shaped platens form the flexible abrasive belt to fit many shapes of work. Free belt reaches inaccessible spots.

Grinds Contours

Saves Setup Time — Eliminates Reworking of Shapes

The C-6 — a money maker in any shop — saves setup time — reworking of the shape — the continual loading of ordinary wheel with necessary abrasive material. For contour grinding — for flat-face grinding or polishing. A self-contained unit — guarded — equipped with dust drawer and outlet — 26" x 38". Mounting of contact roll permits easy, wide-range adjustments.

FREE — Let us prove that Abrasive Belt Machining (wet or dry) can reduce cost of many operations. Send us samples for recommendations — or ask to have our engineers discuss your problems at your convenience, at your plant.

PORTER-CABLE Machine Co.

2704 N. SALINA ST., SYRACUSE 8, N. Y.

In Canada (except B.C.): Write Strongridge, Ltd., St. Catharines, Ont.

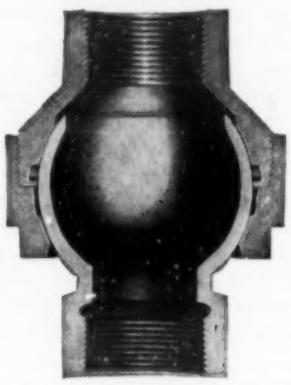
For more details circle NED-2674 on enclosed inquiry slip

VACUUM PAN DRIER has working capacity of 35 gal

Recovery of dry solids by evaporation of solutions or slurries is facilitated by Standard-Plus vacuum pan drier. Illustrated unit is designed for jacket working pressure of 50 psi. All parts in contact with contents of vessel are of type 316 stainless steel. Agitator consists of anchor with spring loaded scrapers driven at 40 rpm by 2-hp right-angle gearmotor. In addition to charge port and nozzles, sight and light glasses are installed in top head; and flush type plug valve permits free discharge of product. Made by **Industrial Process Engineers**, 6-8 Lister Ave., Newark 5, N. J.

For more details circle NED-2675 on enclosed inquiry slip

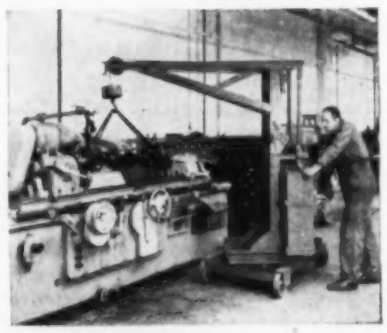
SWIVEL BALL JOINT provides flexibility in piping



Maintaining perfect seal by use of O-ring, this Lombard swivel ball joint assures leakproof flexible connection. It features full 360-degree swivel action, 40-degree angular movement and union connection. By using combination of these joints, any desired amount of flexibility in piping installation can be obtained. Made by **John G. Bell Co.**, Dept. A, 712 E. Sixth St., Los Angeles 21, Calif.

For more details circle NED-2676 on enclosed inquiry slip

PORTABLE CRANE speeds materials handling jobs



Recommended for moving and piling heavy objects, assembling and dismantling machinery, handling heavy parts for machining, and loading and unloading motor trucks and freight cars, this revolving base portable crane is mounted on wheels equipped with antifriction bearings. Capacity of crane can range from 500 to 5000 lb, and its design can be hinged or telescopic. It can be operated manually or by electric power and can be supplied for any required lifting height with fixed boom or revolving base of any practical length. Made by **Barrett-Cravens Co.**, 4637 S. Western Blvd., Chicago 9, Ill.

For more details circle NED-2677 on enclosed inquiry slip

THE FAMOUS MULTIFORM BENDER CUTTER

Produces Without Special Tooling — Saves Die Costs Saves on Expensive Presses

The illustration at the left shows just a few pieces produced on our famous Multiform Bender-Cutter. This efficient machine is useful in all lines of trade.

No. 5 Air Model

FIVE-IN-ONE-TOOL

IT BENDS FLAT AND TUBULAR STOCK INTO ANY SHAPE. CUTS AND PUNCHES FLAT STOCK

J. A. RICHARDS CO. 907 NORTH PITCHER ST. KALAMAZOO 60F, MICH.

For more details circle NED-2678 on enclosed inquiry slip

Spray Nozzles

ALL TYPES. . . .ALL SIZES

Select the spray nozzle you need from a complete range of sizes in types for every industrial application. Every nozzle is precision made to assure accuracy in the most exacting spray operation. These nozzles and their application are described in detail in General Catalog 22 and Pneumatic Atomizing Catalog 23. Get these two useful catalogs now for handy reference.

SPRAYING SYSTEMS CO.

Engineers and Manufacturers

3211 RANDOLPH ST. • BELLWOOD, ILLINOIS

Suburb of Chicago

For more details circle NED-2679 on enclosed inquiry slip

JOHNSON Electric Motor Bearings

EVERY BEARING is machine finished . . . inside diameter, outside diameter and ends, flanges, oil holes, oil grooves, and slots . . . ready to install. Correct tolerances for every make of motor. Johnson EM Bearings are cast in SAE 67 Bronze, the correct alloy for troublefree performance. Bearings for all makes are available from distributors' and warehouse stocks.

Ready to Install

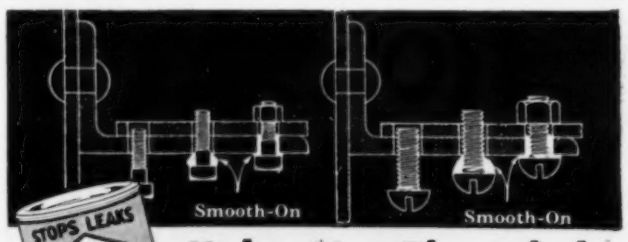
WRITE TODAY FOR CATALOG

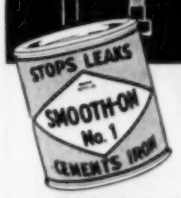
Johnson Bronze

SLEEVE BEARING HEADQUARTERS

580 SOUTH MILL STREET • NEW CASTLE, PA.

For more details circle NED-2680 on enclosed inquiry slip





Holes Not Threaded- But Bolts *Hold*

With Smooth-On No. 1 Iron Cement you can make bolts, studs or machine screws hold in unthreaded or oversize holes. You thus save time, labor, expense. And the parts stay tightly together, because Smooth-On expands slighly in hardening.

Use Smooth-On No. 1 for bigger repairs, too. Seal cracked casings of pumps, valves, condensers, etc., with it. Stop leaks in pipe lines, tanks, radiators. Tighten loose parts and fixtures all over the plant. Get Smooth-On No. 1 in 7 oz., 1 lb., 25 lb., or 100 lb. sizes. If your supply house hasn't it, write us.

SO-318

FREE REPAIR HANDBOOK

40 pages describing Smooth-On repairs that can save you time and money. 170 illustrations. Write for YOUR free copy now.

Smooth-On Mfg. Co., Dept. 10, 570 Communipaw Ave., Jersey City 4, N. J.

Do it with **SMOOTH-ON**

THE IRON CEMENT OF 1000 USES

For more details circle NED-2681 on enclosed inquiry slip

10 TIMES HIGHER ABRASION RESISTANCE... standard abrasive wheel test

4 TIMES HIGHER SNAG RESISTANCE... standard needle test

MUCH HIGHER CHEMICAL RESISTANCE... standard strip immersion tests . . . than natural rubber or standard synthetics

SURETY SURESEAL Synthetic Rubber Gloves

ADD UP TO SAFER HANDS, LONGER WEAR, LOWER HAND PROTECTION COSTS.

THE SURETY RUBBER CO. CARROLLTON, OHIO

Ask for Surety's unique Glove Selector, the quick guide to the right glove material for your operations. Dept. N

▲ For more details circle **NED-2682** on enclosed inquiry slip ▲

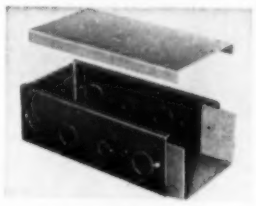
BANDSAW TIRE is easily fastened to wheel

To affix Jiffy-Tire to bandsaw wheel, operator merely rubs soap suds on inside of tire and gently taps wheel into it with rawhide mallet. Grip-Tite cleats assure complete working safety since tire will not break or thow. When it needs replacing, it must be cut with hack-saw for removal.

Tire is made of molded tread-rubber with steel backbone and is finished with crowned face to assure even tension on blade. Before it can be used, center groove must be cut around wheel to accommodate cleats and one edge of wheel must be slightly chamfered so that tire can be slipped on easily. Made by **Carter Products Co.,** 960-A Michigan Trust Bldg., Grand Rapids, Mich.

▲ For more details circle **NED-2685** on enclosed inquiry slip ▲

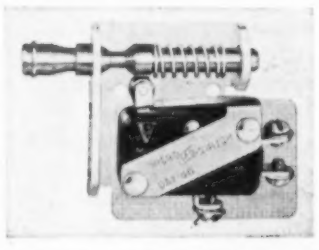
RECTANGULAR WIREWAY flangeless type has screw cover



Designed for special structural requirements and conditions encountered in various wiring installations, this 4 x 6-in. rectangular wireway is particularly suitable for meter and panel board applications. It is produced in 1, 2, 3, 4 and 5-ft lengths and is approved by Underwriters' Laboratories. Made of heavy gage steel with knockouts spaced on 3-in. centers on both sides and end plates, it permits contractors to branch off with piping to smaller outlets along line. Made by **Keystone Mfg. Co.,** 23330 Sherwood Ave., Center Line, Mich.

▲ For more details circle **NED-2686** on enclosed inquiry slip ▲

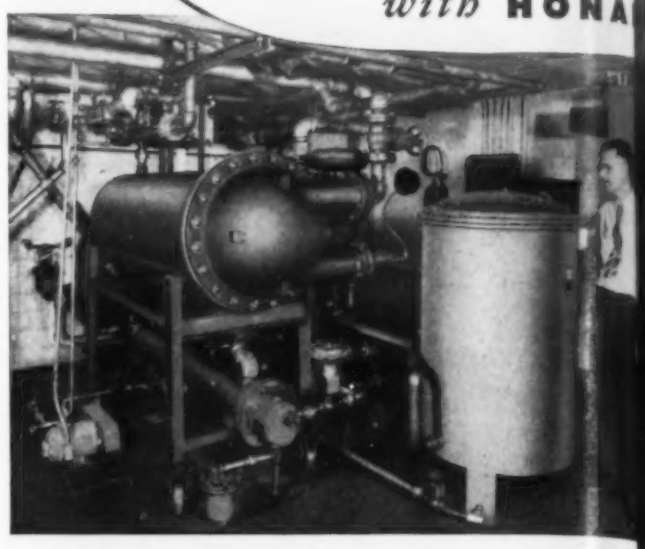
DOOR INTERLOCK SWITCH automatically cuts off power circuit



When high frequency cabinet door is opened on radio, radar, X-ray, television, induction heating and other electronic control equipment, this model No. 2AC1 interlock switch assembly assures safety to operating personnel. It consists of combination mounting bracket, rod actuator and roller-lever actuated snap-action precision switch. With this unit installed and operated by opening and closing cabinet door, personnel can close circuit for checking by manually moving rod actuator to maintained contact position. When door is closed, rod actuator automatically returns to normal position. Assembly has single-pole double-throw circuit arrangement with electrical rating of 10-amp 110/220-v ac; 10-amp 28-v dc noninductive load; and 6-amp 28-v dc inductive rating. Made by **First Industrial Corp.,** Micro Switch Div., 205 S. Chicago Ave., Freeport, Ill.

▲ For more details circle **NED-2687** on enclosed inquiry slip ▲

SAVES $6,355 annually with HONAN



Honan-Crane Oil Purifiers serving three casting lines at Cleveland Graphite Bronze prevent formation of sludge and organic deposits in spray nozzles and on walls of heat exchangers (above). Costly cleaning out operations are eliminated . . . 600 gallons of quench are saved each month . . . proper control of oil temperature and flow-rate is maintained.

▲ For more details circle NE

DO YOU KNOW?

—that a PILOT LIGHT CAN IMPROVE YOUR PRODUCT

. . . add attraction—safety—service?

Ask DIALCO — what lamp to use — how to use it — what it will do — what it will cost

THIS MAY BE THE ONE

Designed for low cost NE-51 Neon

• Built-in Resistor • Patented • U/L Listed • Rugged

Catalogue Number 521308 — 997 for 110 or 220 volts.

SAMPLES for design purpose NO CHARGE

NEW! Write for the "HANDBOOK OF PILOT LIGHTS."

Write us on your design problems.

Foremost Manufacturer of Pilot Lights

The DIAL LIGHT COMPANY of AMERICA

900 BROADWAY, NEW YORK 3, N. Y.

▲ For more details circle **NED-2683** on enclosed inquiry slip ▲

PRE-ENGINEERED AN CA

—to give you ter

MATHEWS CO VE
ELLWOOD PE
SAN CARLOS, CALIFORNIA

▲ For more details circle NE

Dissolve or Disperse...

2 to 20 Times Faster

WITH THE

COWLES *Ultra-Fast* METHOD

Two to 20 times faster than conventional mixers, the Cowles Ultra-Fast Method handles the toughest dissolving and dispersing jobs in cycles that save up to 46½ hours running time. Yet this amazing method is not new . . . not revolutionary. It's just the simple application of classical physical laws, that have been given practical proof over the years in both the Cowles Hydrapulper, as well as in the Cowles Dissolver and Disperser.

Engineered to the Job

Standard dissolvers employing the Cowles Method are available in 4 different types, each adapted in motor speed, horsepower, design of impeller and chemical inertness of tank to the physical and chemical properties of the materials being treated. But special designs to fit special processes are regularly produced under reasonable delivery-date schedules. Let our engineers study your needs and make a recommendation. You may find your problem simpler than you think.

The Cowles Company INCORPORATED
124 TRACKSIDE, CAYUGA, N. Y.
Associate: Alexander Fleck, Ltd., Ottawa, Ont.

▲ For more details circle **NED-2684** on enclosed inquiry slip ▲

STEEL STRAPPING speeds shipping to keep up with faster production flow

The Plasticrete Corp., Hamden, Conn., worked out a faster production system on cinder blocks. Problem: how to package these "cubes" of 90 or more blocks for shipping at this speeded up production rate. Solution: tying the blocks together into one compact unit with Stanley Steel Strapping. Just another packaging, shipping accomplishment for the Stanley Steel Strapping System. Write for information on the complete line . . . reels, tools and accessories. The Stanley Works, Steel Strapping Division, 177 Lake St., New Britain, Conn.

STEEL STRAPPING AND CAR BANDING SYSTEMS

STANLEY Reg. U.S. Pat. Off. HARDWARE • TOOLS ELECTRIC TOOLS • STEEL STRAPPING • STEEL

▲ For more details circle **NED-2688** on enclosed inquiry slip ▲

UNION METAL Materials Handling Equipment Reduces Operating Costs

THE Union Metal drop-bottom dump box pictured here makes important savings for a plate glass manufacturer. Formerly, broken glass was collected in wooden bins. The contents were then shovelled into wheelbarrows, hauled away and dumped. It was costly, time-consuming and arduous.

Now the drop-bottom dump box does the entire job! When filled, a fork-truck picks it up, whisks it away, dumps it, returns it to work. The whole operation is reduced from hours to minutes . . . is much easier, too.

Union Metal boxes, skids, pallets and combinations can save time and money on practically any materials handling job. For information, write The Union Metal Manufacturing Company, Canton 5, Ohio.

CUTS HOURS'

UNION METAL *Materials Handling Equipme*

▲ For more details circle N

...lly on quenching operations
...RANE oil purification

After installing Honan-Crane Oil Purifiers on strip steel casting lines, the Cleveland Graphite Bronze Company saved $6,355 annually on quenching operations . . . and the purification equipment paid for itself in 10 months.

Other case histories show equal or greater savings wherever Honan-Crane equipment is used to filter and handle oils and coolants in metal working operations.

How about you? Can you afford *not* to save the thousands of dollars that Honan-Crane purification offers you? Can you afford *not* to install equipment which, in most cases, pays for itself during the first year . . . often in *five months?*

Write Honan-Crane, 405 Wabash Avenue, Lebanon, Indiana, for revealing case histories on quench oils, cutting oils and coolants.

OIL ENGINEERING

Honan-Crane Corp.
A subsidiary of
Houdaille-Hershey Corporation

...rcle NE... enclosed inquiry slip ▲

...AN CARRIED IN STOCK
...you ...ter service

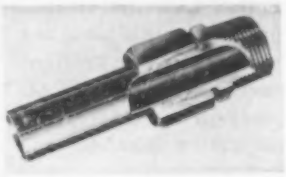
● Nearly 50 years of package conveyer experience is built ... the Mathews complete line of standardized conveyers which ... available today. Sections of Portable Roller and Wheel ...veyer, Portable Belt Conveyers and pre-engineered General ...pose Belt Conveyers are available to promptly meet today's ...uirements for quality package handling equipment. When ...cial handling problems arise, the same engineers who have ...eloped this fine line are available to design the powe... and ...vity conveyers or special conveying machinery necessary to ...e them. For complete conveyer service, the Mathews Organiza... is at your immediate call. Engineering Offices or Merchandise ...ributors are located in principal cities.

...CONVEYER COMPANY
...OOD ... PENNSYLVANIA
...IA PORT HOPE, ONTARIO, CANADA

...circle NE... enclosed inquiry slip ▲

...enclosed inquiry slip ▲

FLARELESS TUBE FITTING
limits tube gouging and distortion



Adaptable for close-quarter connections, AFCO flareless tube fitting permits quick installation without special tools. Gripping action of fitting sleeve forms leakproof seal and makes fitting especially suitable for copper, steel, stainless steel and aluminum tubing. It is available in all standard shapes and sizes for tubing up to 1-in. OD. Many special combination shapes and sizes up to 2 in. can be furnished. All shapes are machined from forgings, while all other parts are machined from bar stock. Fitting meets all requirements of JIC hydraulic standards for industrial equipment and specification AN-F-47. Made by **Aircraft Fitting Co.,** 1402 E. 30th St., Cleveland 14, O.

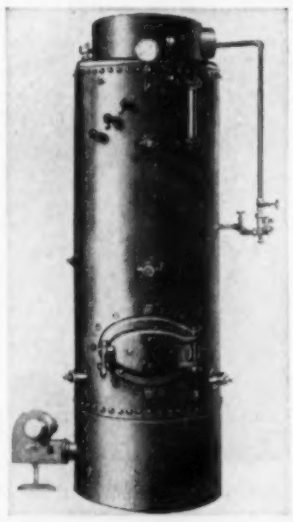
▲ For more details circle **NED-2692** on enclosed inquiry slip ▲

CIRCULAR SAW BLADE
design minimizes injury hazards

Featuring kick-back safety and power saving, Cut-Control circular saw blade employs limited number of carbide-tipped teeth spaced at intervals around periphery of blade. Normally eight teeth are used which protrude only slightly over periphery so that grabbing of wood is reduced and injuries from hand contacting blade are slight. Other features include long life with infrequent need for sharpening, minimized power requirements and quiet operation. Cut produces chips, and blade can be run in reverse to create semiautomatic feed. Distributed by **P.T.I. Inc.,** 401 Broadway, New York, N. Y.

▲ For more details circle **NED-2693** on enclosed inquiry slip ▲

VERTICAL BOILER-BURNER UNIT
for steam pressure up to 100 psi



High pressure steam can be provided by vertical tubular boiler-burner units for bakeries, laundries, cleaning plants, canneries, dairies or any industrial plant requiring quick source of automatic steam at low cost. Available in sizes from 3 to 15 hp, units are equipped with standard York-Heat gun type oil burner, automatic controls, low water cutoff, condensate return system and draft adjuster. They have full-length riveted, ASME approved construction and are furnished with base, combustion chamber and trim. Made by **York-Shipley,** 85 Jessop Place, York, Pa.

▲ For more details circle **NED-2694** on enclosed inquiry slip ▲

Economical Storage

ROTABINS

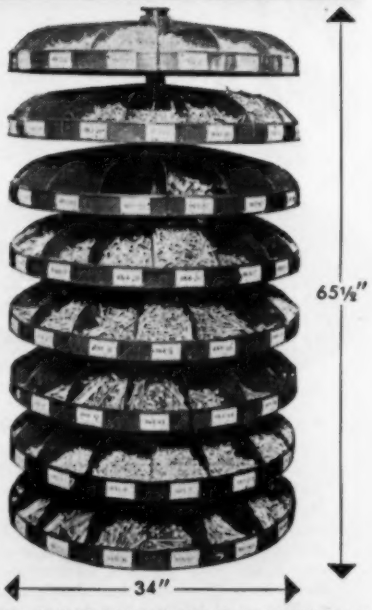
Model 3440 65½" high
8 Sections . . . $84
Model 3435 65½" high
7 Sections . . . $75
Model 3420 37" high
4 Sections . . . $47

All prices F.O.B. Wellston, Ohio.

IMMEDIATE DELIVERY

All sections have 5 compartments 21" wide at face. Extra dividers may be used. Model illustrated has 120 compartments each 7" wide at face.

Rotabins turn aisle space into storage space, eliminate miles of needless walking, save time and reduce storage overhead.

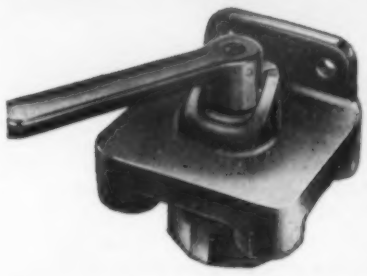


THE FRICK-GALLAGHER MANUFACTURING COMPANY
Sales: 408 Shubert Building, Philadelphia 2, Pa.

FRICK - GALLAGHER
WELLSTON, OHIO
SHELVING • PARTS BINS • ROTABINS • COUNTERS • RACKS • TABLES

▲ For more details circle **NED-2695** on enclosed inquiry slip ▲

AIR CONTROL VALVE



- ROTARY TYPE
- HAND LAPPED
- ¼" PIPE PORTS
- 3- or 4-WAY
- LOW-PRICED

Thousands of N. P. hand operated Control Valves are controlling air pressure on buses, street cars, subway and elevated cars, where their dependability is essential to the safety of passengers.

Quantity production of this high-quality valve makes possible its unusually low price. For complete information, write for Bulletin No. DC-204

NATIONAL PNEUMATIC CO., INC.
Industrial Division
Boston • Graybar Bldg., New York • Chicago

Pneumatic Specialists Since 1904

▲ For more details circle **NED-2696** on enclosed inquiry slip ▲

PRESSING, CRIMPING, RIVETING
Rejects slashed. A dozen Multipress units bring new speed and economy to several different operations in the assembly of automobile door locks. User likes quiet, safe, low-cost operation.

When you do it with *MULTIPRESS**
—you do it for LESS

T.M. Reg. U.S. Pat. Off.

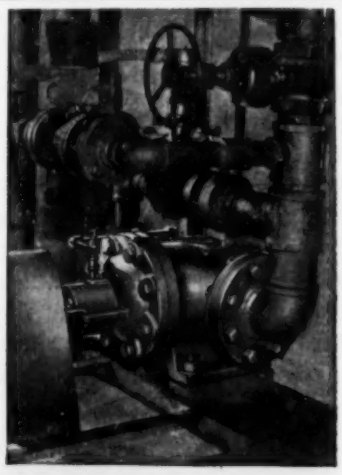
Another case record . . . more proof that, on an amazing range of jobs in nearly every industry, Multipress is the most efficient, lowest-cost answer available. Featuring advance valving and design, Multipress uses modern, oil-smooth hydraulic power to achieve safe, easy, accurate production *at new high speeds.* Sizes and capacities from 1 to 35 tons. Widely interchangeable controls, operating features and accessories make it easy to tailor standard Multipress units to your exact needs, *at low cost.* Write us today.

The DENISON Engineering Co.
1151 Dublin Road Columbus 16, Ohio

DENISON HydrOILics

▲ For more details circle **NED-2697** on enclosed inquiry slip ▲

Silent elevator service



made possible by IMO OIL PUMP

This quiet, reliable, pulsation-free, vibrationless pump is just the thing for hydraulic elevator operation — or any other service where noise is a nuisance and reliability is essential.

De Laval-IMO pumps are available for general handling of oil and fluids over a wide range of viscosities.

Send for Catalog LE-W I-152

IMO means I MOVE OIL

IMO PUMP DIVISION of the
DE LAVAL STEAM TURBINE CO.
TRENTON 2, NEW JERSEY

▲ For more details circle **NED-2698** on enclosed inquiry slip ▲

YALE Lift King telescopic electric fork truck

CAPACITIES: 3,000 to 8,000 lbs.

130-INCH LIFT on 83" high models up to 5,000 lb. capacity. 68" high models have 100' lift.

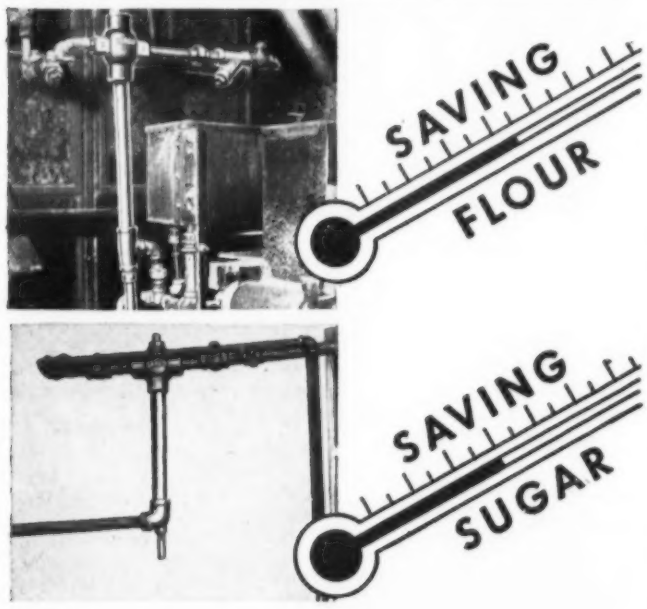
66-INCH FREE LIFT on 83" high models for loading freight cars to capacity. 68" high models have 51" free lift for capacity truck and trailer loading.

DRIVES LIKE AN AUTO—Automotive controls and design make driving easier, safer, more comfortable than ever before.

RUGGEDLY CONSTRUCTED with hydraulic lift, hypoid drive power axle, Cam-o-tactor control and welded heavy plate steel. *Write for Bulletin 5151.*

YALE THE YALE & TOWNE MANUFACTURING CO.
Roosevelt Boulevard • Philadelphia 15, Pa.
HAND LIFT AND POWER TRUCKS • HAND AND ELECTRIC HOISTS • INDUSTRIAL DIAL SCALES

For more details circle **NED-2699** on enclosed inquiry slip



Because THERE'S ONLY ONE RIGHT TEMPERATURE FOR EACH JOB

When food materials come to the mixing and final processes, temperatures are critical — often to within a degree. But critical or not, these food processors found they could save sugar and flour by having the water exactly right at the last step — with a Sarco Water Blender.

In making syrup it's important to dissolve all the sugar for a better product — and lower cost. In macaroni, it's the art of getting the dough just right to go through the machines — without shut downs, rejected batches and wasted flour.

The Sarco Water Blender — a three way mixing valve operated by the famous Sarco bellows, goes into the line as easy as a T — and as quickly. It is not affected by normal changes in water temperatures or pressures. It costs little — very little considering what it does.

THE SARCO WATER BLENDER is used extensively for process and wash water and gang showers. It also controls engine and compressor jacket water.

ASK FOR BULLETIN NOS. 700 AND 800

262

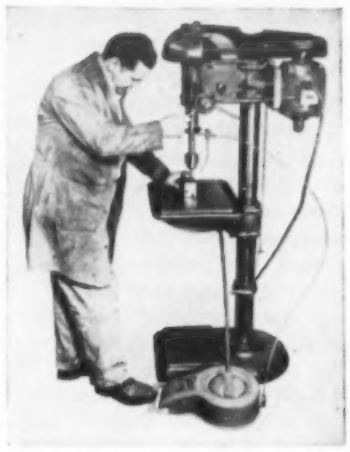
SARCO SAVES STEAM

SARCO COMPANY, INC.
Represented in Principal Cities
Empire State Building, New York 1, N.Y.
SARCO CANADA, LTD., TORONTO 5, ONTARIO

IMPROVES PRODUCT QUALITY AND OUTPUT

For more details circle **NED-2700** on enclosed inquiry slip

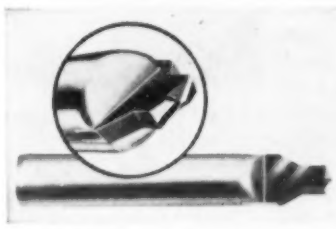
COOLANT SUPPLY UNIT employs foot-powered pump



Suitable for use on drill press, tapping machine, milling machine or bench, Lubri-King foot-powered coolant pump eliminates use of oil cans and brushes for applying lubricant. Unit consists of 20-gage steel tank that holds 2 gal of lubricant or coolant, foot pump, 5 ft of plastic hose and nozzle attachment with bracket that can be fastened quickly to any machine. Stroke of foot pedal on pump controls amount of fluid delivered to cutting tool which can be as little as few drops or stream strong enough to wash chips out of taps. Where large volume of fluid is required, it can be returned to tank and strained through 50-mesh screen. Made by **W. A. Horejsi Co.**, Dept. NED, 2001 James Ave. N., Minneapolis, Minn.

For more details circle **NED-2701** on enclosed inquiry slip

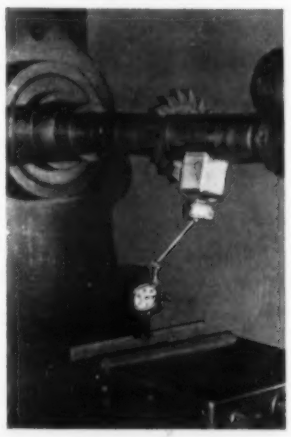
CENTER DRILL suitable for use in hardened steel



Developed originally for company's own use in drilling new centers on tools that had been ground off or on which centers were so worn as to be useless, this center drill is offered for general use on hardened steel. It is available in various standard sizes. Made by **National Tool Salvage Co.**, 6513 Epworth Blvd., Detroit 10, Mich.

For more details circle **NED-2702** on enclosed inquiry slip

MAGNETIC BASE HOLDER for dial indicators or work light



Designed to hold test indicators or Handi-Lite portable light in any desired position, Miti-Mite magnetic base holder can be mounted on any round or flat iron or steel surface. Unit shown in illustration has universal ball and socket and swivel arm construction to simplify difficult setups. Holder is supplied with adapter to allow fastening of most commonly used indicators. Powerful Alnico magnet which is incorporated in 1 x 1⅛-in. base exerts 50-lb pull and will last many years without re-energizing. Made by **Enco Mfg. Co.**, Dept. 60, 4522-24 W. Fullerton Ave., Chicago 39, Ill.

For more details circle **NED-2703** on enclosed inquiry slip

Suzy the stock girl says...

"IT'S A CINCH to move materials in these containers!"

• And she's right! Workers in your plant can move materials easier, faster, *and at less cost* with Diamond Fibre Receptacles. That's because these containers are made from an unusual plastic weighing only ½ as much as aluminum! Yet C-D Diamond Fibre is as tough as elephant hide—will not crack, splinter, or peel. Moreover, boxes, barrels, cans, and other containers made of Diamond Fibre have smooth, hard surfaces that will not mar even the most delicate fabrics. Write for descriptive Receptacle Catalog, now.

C-D DIAMOND FIBRE RECEPTACLES
CONTINENTAL-DIAMOND FIBRE CO., NEWARK 30, DEL.

For more details circle **NED-2704** on enclosed inquiry slip

Varglas SILICONE

Electrical Insulating Tubing and Sleeving for wide temperature ranges . . .

Between 85° F below Zero and 500° F above Zero

Owes its amazing temperature range to a combination of *Varglas* and *Silicone*. Resists moisture and oil—flame resistant and self-extinguishing —*Strongest of all accepted insulating materials.* Pioneered by Varflex.

TEST VARGLAS SILICONE IN YOUR PLANT.

Write today for your free folder of working samples.

NEW SLEEVING AND TUBING LINE

Low cost VARFLO for applications that do not have to allow for high operating temperature. Won't fray — takes rough handling without loss of dielectric — won't support combustion (made with Fiberglas braid). Samples and prices on request.

Varflex CORPORATION
310 N. Jay St.
Rome, N. Y.

For more details circle **NED-2705** on enclosed inquiry slip

WHY "FULLY-ADJUSTABLE" THREADERS ARE BETTER!

• **The new Beaver No. 26-R "fully-adjustable" pipe threaders are better because:**

1. They cut standard, oversize or undersize threads of uniform length.
2. The cam-controlled dies adjust as a single unit—which means that all die segments cut equally.
3. The Beaver 26-R is the only 1 to 2-inch threader on the market which will cut either standard "taper" or electric "straight" conduit threads.
4. No die-changing—one set of dies threads four sizes: 1, 1¼, 1½ and 2 inches.
5. The Beaver 26-R is the ONLY 1 to 2-inch easy-working pipe threader on the market which is "fully-adjustable". All others are semi-adjustable.

• **Write Today for New Complete Catalog No. 49. Address Beaver Pipe Tools, Inc., 242-300 Dana Avenue, Warren, Ohio, U. S. A.**

BEAVER PIPE TOOLS

For more details circle **NED-2706** on enclosed inquiry slip

modern design for modern sanitation

LP-20
Available in Black or White

OPEN FRONT AND BACK DESIGN... means quicker, easier cleaning. Cuts upkeep to a minimum. No germ-collecting crevices, always sanitary.

SELF-RAISING... Seat remains upright when not in use with bowl serving as urinal. Seat stays clean and dry.

SOLID PLASTIC... Shatter-proof, fireproof. Plastic covered hinge is dirt free, moisture proof. Assures long life, low maintenance.

WRITE NOW for full details on Model LP-20 (illus.), Model LP-40 with self-sustaining hinge, and a complete line of conventional models.
DEPT. NE

SPERZEL
123 14th Avenue South
Minneapolis, Minnesota

All Sperzel Seats Fit Standard Bowls

For more details circle **NED-2707** on enclosed inquiry slip

"SMALL PARTS" Production Problems

Solves RIVETING PRESSING STAKING MARKING PUNCHING ASSEMBLING

- Electric push button control, hand or foot operated, through Hannifin's new exclusive fast-cycling 4-way solenoid valve.
- Guided ram. Speed easily adjustable. Automatic return.
- Removable steel base plate. Facilitates changing job set-ups through use of alternate work bases.
- Extremely rigid frame. Built to big press standards for quality.
- Cylinder "TRU-BORED" and honed. Long life. Minimum maintenance.

the New HANNIFIN "Han-D-Press" air operated!

ASK FOR NEW BULLETIN 251.

HANNIFIN CORPORATION 1101 So. Kilbourn Chicago 24, Illinois

For more details circle NED-2708 on enclosed inquiry slip

JUST SAY "TRUSCON" AND THERE'S A BUILDING

Meet today's needs for adequate manufacturing and storage facilities with Truscon Ready-Made Steel Buildings. These standard-unit, prefabricated structures can be combined in innumerable ways to form buildings for many purposes. Features include fire resistance, permanence, ease and speed of erection, low upkeep, low cost and high investment value. They can be dismantled and re-erected quickly and easily on any site of your selection.

FREE BOOK! Shows actual installations and mechanical details, to help you develop your plans.

TRUSCON STEEL COMPANY
YOUNGSTOWN 1, OHIO • Subsidiary of Republic Steel Corporation

For more details circle NED-2709 on enclosed inquiry slip

Two types, 7 basic sizes. Capacities from 400 CFM to 23,500 CFM.

nyb COMET EXHAUSTAIR

Propeller type ventilating fans deliver large volumes of air at low resistance and low current consumption. All wheels are machine balanced for smooth, vibration-less operation. They are laboratory tested, accurately rated and fully guaranteed in strict accordance with Standard Codes.

CERTIFIED RATINGS AUTHORIZED BY NAFM

Write for Bulletin 494

nyb THE NEW YORK BLOWER COMPANY
GENERAL OFFICES • 32nd STREET & SHIELDS AVENUE • CHICAGO 16
FACTORIES AT LAPORTE, INDIANA AND CHICAGO, ILLINOIS

For more details circle NED-2710 on enclosed inquiry slip

THREE-WHEELED PICK-UP features automatic transmission

Weighing 215 lb and powered by Continental Red Seal engine, this 1950 Globester three-wheeled Pick-Up is recommended for interplant transportation and package delivery. It parks easily, can turn in 6-ft circle and is designed so that even those physically handicapped can operate it easily. Maximatic automatic transmission assures smooth starting and long service life. Made by **Globe Corp.**, Motor Scooter Div., Dept. N, Joliet, Ill.

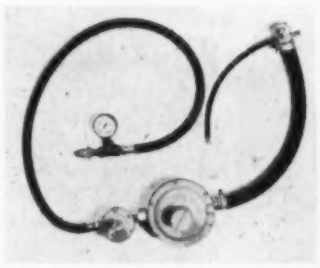
For more details circle NED-2711 on enclosed inquiry slip

CYLINDER-SHAFT SEAL three-piece unit reduces blow-by

Consisting of one inner ring and two close fitting outer rings, this three-piece cylinder and shaft seal can be made of noncorrosive material or practically any metal alloy. Step of inner ring is staggered so that, even after much wear, blow-by is kept to minimum. Applications of seal include use on hydraulic hoists and jacks, pumps and machinery. Made by **Auto-Diesel Piston Ring Co.**, 1445 E. 32nd St., Cleveland 14, O.

For more details circle NED-2712 on enclosed inquiry slip

ENGINE CARBURETION UNIT permits changeover from gasoline



Installation of this No. 2027-C spring-loaded carburetion conversion unit designed for mobile engines involves but simple carburetor hookup and attachment to fuel tank. It permits engine to operate on butane, propane or natural gas and does not prevent quick changeover or ability of engine to run on gasoline. Change of fuel from gas to gasoline is made by shutting off gas cylinder valve and opening gasoline tank valve while leaving propane or other gas supply unit in place. Unit is designed to fit all tractors and consists of high pressure regulator and vacuum regulator mounted on line between fuel tank and carburetor. Spring-loaded construction of valves insures against fuel leakage and allows carburetion in any position. In addition to tractor application, it can be used on stationary engines up to 150 hp. If year-around service is desired on converted mobile units, vaporizer can be installed. Made by **Black, Sivalls & Bryson, Inc.**, 200 Kemper Bldg., Kansas City 6, Mo.

For more details circle NED-2713 on enclosed inquiry slip

LIFE STORY of a JOMAC WORK GLOVE

1. First day on the job . . . and doing fine. Jomac cushions the hand, doesn't snag or tear.

2. Some time later . . . and a trifle worn. Presto! Shifts from right to left and starts a new life.

IT'S TRUE—Jomac Work Gloves revolutionize handling problems. They're reversible, flexible, long-wearing. They're easy to wash or dry clean. They protect against heat or cold. Write for complete details.

JOMAC WORK GLOVES
C. WALKER JONES CO.
6148 N. Lambert St. Philadelphia 38, Pa.

For more details circle NED-2714 on enclosed inquiry slip

KEEP ELECTRIC MOTORS On the Job!

IN EVERY MAJOR INDUSTRIAL CENTER, from Maine to California, you'll find an outstanding Allis-Chalmers Certified Service Shop to give you *prompt, skillfull* motor repair service! The shop to which you go will be selected for its reliability and excellent repair facilities. It will use nothing but factory approved methods and parts.

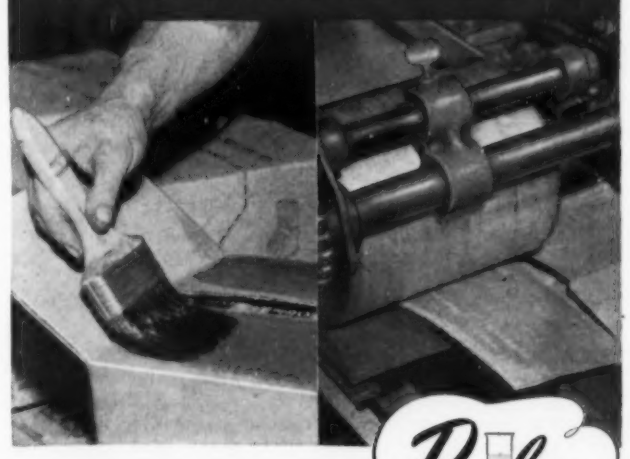
So next time you're looking for a way to cut lost production hours and get rolling again, fast — call the A-C Certified Service shop in your area. You'll get fine workmanship, fast service, fair prices. A-2927

ALLIS-CHALMERS, 918A SO. 70 ST. MILWAUKEE, WIS.

ALLIS-CHALMERS

For more details circle NED-2715 on enclosed inquiry slip

Seal CASES IN 20 SECONDS!



Paisley SCIENTIFIC ADHESIVE SERVICE

BOXEAL is the new *fast setting* Shipping Case Glue which tears fibres 15 to 20 seconds after application by brush or machine. Brings new high speed and efficiency to all production lines where short pressure time is essential. BOXEAL permanently seals all types of shipping boxes, corrugated, Fourdrinier kraft, jute, solid fibre. Non-toxic, odorless, stainless, and most of all . . FAST SEALING!

Get our complete laboratory report on Paisley BOXEAL and take advantage of the offer to send a trial 5 gallon shipment at the 55 gal. drum price available to all drum users of shipping case glues. We'll ship ON APPROVAL, F.O.B. our nearest plant, New York or Chicago. Fill in the coupon below, attach it to your letterhead, and mail it to us TODAY.

FILL IN & MAIL COUPON NOW FOR GENEROUS TRIAL OFFER

Gentlemen: Please send complete information about Paisley BOXEAL Shipping Case Glue.

☐ You may send, on approval, trial 5 gal. shipment of "BOXEAL" at 55 gal. drum price.

☐ Send me a copy of Laboratory Report on "BOXEAL".

FIRM _____

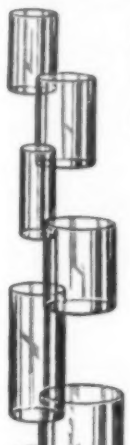
STREET _____ CITY _____

BUYER _____

PAISLEY PRODUCTS INCORPORATED
Manufacturers of Glues, Pastes, Resin Adhesives, Cements and Related Chemical Products
1770 CANALPORT AVE., CHICAGO 16, ILL. • PHONE CANAL 6-2219
630 W. 51st STREET, NEW YORK 19, N. Y. • PHONE COLUMBUS 5-2860

For more details circle NED-2716 on enclosed inquiry slip

GLASS CYLINDERS



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VISIBLE HOPPERS
LIGHTING FIXTURES
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METERS
COLUMNS
OR ANY OTHER APPLICATIONS

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offers you a wide variety of cylinder sizes in economical quantities. Or we will fabricate blown glass cylinders to your specifications. We invite your inquiries. Write for our Glass Cylinder catalogue No. 65.

Dunbar Glass Corporation

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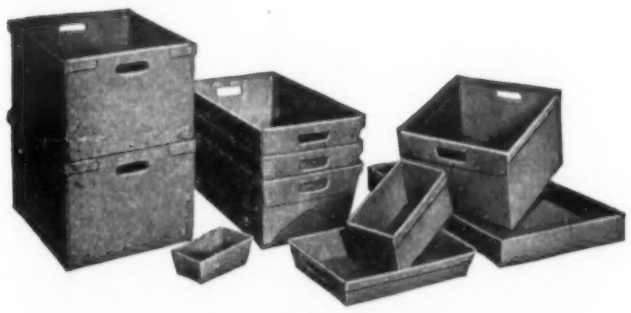
NEW YORK CHICAGO CLEVELAND LOS ANGELES

For more details circle NED-2717 on enclosed inquiry slip

CONVOY TOTE BOXES

Increase Payload . . . Reduce Cost



LIGHTWEIGHT—2 cu. ft. Convoy Stacking Tote Box weighs only 8½ lbs.

CHEMICALLY HARDENED CORRUGATED BOARD Many Convoy Tote Boxes have been in active daily use for more than two years — exclusive chemical impregnation process binds and hardens corrugated board.

NO MAINTENANCE—Convoy Tote Boxes are so inexpensive that they can be discarded when they finally become unserviceable.

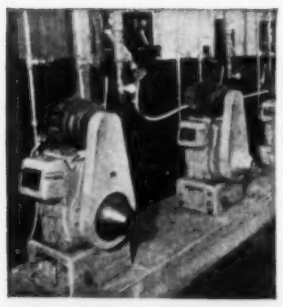
Over 100 Stock Sizes Available Now

. . . Write for sizes and prices

CONVOY, INC. Dept. N CANTON 7, OHIO

For more details circle NED-2718 on enclosed inquiry slip

HIGH VACUUM PUMPS for CONTINUOUS SERVICE



WHERE hard, continuous service is an important production factor to meet today's exacting requirements, Stokes High Vacuum MICROVAC Pumps prove a profitable investment.

Stokes MICROVAC Pumps feature high volumetric efficiency . . . low power consumption . . . long wear . . . low up-keep and maintenance . . . simple design . . . easy installation.

F. J. STOKES MACHINE COMPANY, 5964 TABOR ROAD, PHILADELPHIA 20, PA.

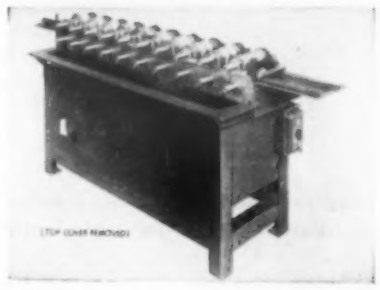
Industrial applications of High Vacuum are described in this new 32-page catalog . . . sent on request.

FJS

F. J. STOKES MACHINE COMPANY

For more details circle NED-2719 on enclosed inquiry slip

CLEAT ROLLING MACHINE forms standing cleat in sheet metal



Standing S-cleat rolled in this cleat rolling machine is particularly adapted to sheet metal duct work such as fabricating large trunk or branch lines in industrial heating and ventilating units. Any gage metal from No. 20 to No. 26 can be handled at speed of from 55 to 60 fpm with form having 1-1/16-in. pocket depth and 1 in. angle height. Standard equipment includes 5-hp 220/440-v electric motor with matched double V-belt drive. Machine is furnished with extended shafts to accommodate special roll sets which can be made on order for other rolling operations. Made by **Lockformer Co.,** 4613 W. Roosevelt Rd., Chicago 50, Ill.

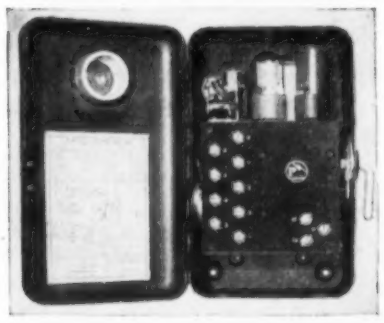
For more details circle NED-2720 on enclosed inquiry slip

SELF-PRESSURE TORCH contains ½-pt gasoline or alcohol

Suitable for light shop work, No. 59 gasoline and No. 60 alcohol torches are furnished with soldering iron rest and windshield. Having 3½-in. diameter, heavy brass tank minimizes tipping and holds 7½ oz of fuel. Torches will burn 3½ hours full-open at temperature of 1700° F. Brass wire interwoven with wick conducts heat from burner into tank. Made by **Turner Brass Works,** Sycamore, Ill.

For more details circle NED-2721 on enclosed inquiry slip

PHOTOELECTRIC CONTROL has general industrial application



Recommended for counting or conveyor, motor, valve, stop-motion and automatic control of industrial processes, series 20 photoelectric control can be used also for short-range signal systems, production inspection and machinery safeguards. It can be obtained with phototube integral with control or located in separate small housing for applications where space is limited. To make it useful in all types of safety applications, it is supplied with forward and reverse circuits so that tube replacement is indicated by either energized or de-energized relay. Terminal panel connections provide for operation from 115 and 230-v supply, and tamperproof sensitivity adjustment permits positive operation over varying distances between phototube and light source. Made by **Photoswitch Inc.,** 77-89 Broadway, Cambridge 42, Mass.

For more details circle NED-2722 on enclosed inquiry slip

SHENANGO-PENN *Centrifugal* CASTINGS ... KEY TO SAVINGS

Shenango-Penn centrifugal casting process gives this 220-groove Fourdrinier warp roll desirable uniformity, plus extra strength to avoid distortion due to roll weight and force of wire tension in service.

NEED ROLLS?

Weigh these money-saving facts!

1. Shenango-Penn's centrifugal casting process, a natural for rolls, assures greater strength and uniformity, finer, pressure-dense grain, and freedom from hidden defects. Result: prolonged wear-life, ability to withstand abnormal loads, less maintenance, less replacement!

2. Shenango-Penn offers complete, modern machining facilities, plus years of specialized roll-making experience, to meet your specifications with over-all precision. You save time and avoid trouble!

For bulletins, for data on rolls or roll assemblies of *any* size or type, ferrous or non-ferrous, write . . .

SHENANGO-PENN MOLD COMPANY
885 West Third Street Dover, Ohio
Executive Offices: Pittsburgh, Pa.

SHENANGO PENN

All Bronzes • Monel Metal • Ni-Resist • Meehanite® Metal

For more details circle NED-2723 on enclosed inquiry slip

No More Guessing . . . accurate Torque Control

No More Guessing

Friction
Adjustments
Moving Parts
Fragile Mechanisms

Accuracy — Permanently Accurate — Closer Product Quality Control
Tool Life—Lower Tool Cost
Speed — Lower Assembly Cost Per Unit

How tight threaded fasteners are. Use a Sturtevant permanently accurate torque wrench to obtain product quality control and thus insure field performance and product reputation. Write for Bulletin—SW22

P.A. STURTEVANT CO.
ADDISON QUALITY ILLINOIS

For more details circle NED-2724 on enclosed inquiry slip

Power Plus- for lifting and transporting full capacity loads

With engines especially geared for heavy-duty industrial use, with plenty of power and speed to spare — even for the heaviest loads — Towmotor cuts 20% to 30% from your production costs. Learn why Towmotor's rugged features make every Mass Handling job easier, faster, safer. Write for a copy of "Handling Materials Illustrated." Towmotor Corporation, Division 25, 1226 E. 152nd St., Cleveland 10, Ohio. Representatives in all Principal Cities in U. S. and Canada.

every handling job is easier with TOWMOTOR MHI

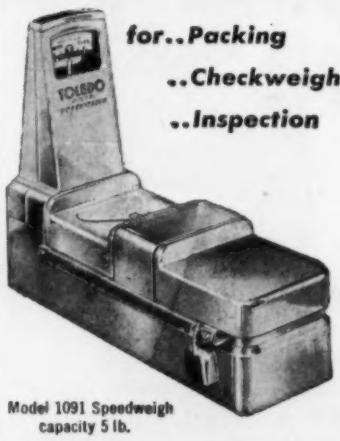
TOWMOTOR THE ONE-MAN-GANG®

FORK LIFT TRUCKS and TRACTORS

RECEIVING • PROCESSING • STORAGE • DISTRIBUTION

For more details circle NED-2725 on enclosed inquiry slip

Control Costs with OVER-UNDER SCALES



for..Packing
..Checkweighing
..Inspection

Model 4075, capacity 30 lb.

Model 0891, capacities 60 lb. and 125 lb.

Model 1091 Speedweigh capacity 5 lb.

Model 1891, capacities 125 to 500 lb.

Toledo has the scales you need for speedy, accurate Over-Under weighing! Complete line for your needs in packing, checkweighing and inspection. Models sensitive to 1/64 oz. . . . capacities to 500 lb. Send for booklet C-10. Toledo Scale Company, Toledo 1, O.

TOLEDO

HEADQUARTERS FOR SCALES

For more details circle NED-2726 on enclosed inquiry slip

TAKE **LOADS** OFF YOUR MIND . . .

WITH

STEEL-PARTS INCLINED PLANE STEEL BELT CONVEYOR . . . .

✓ STEP UP HANDLING!
✓ SAVE VALUABLE SPACE!
✓ REDUCE WASTE!

• Solve each specific materials handling problem with the specific STEEL-PARTS steel belt conveyor pre-engineered to that need. The STEEL-PARTS Inclined Plane model shown here is ideal where height of elevation is a pre-determined factor. Raise production efficiency — lower unit handling cost — reduce waste — save operating space with flexible, sagless STEEL-PARTS steel belt conveyors. Write today for complete information, including engineering data and specifications.

STEEL-PARTS MANUFACTURING CO.
4634 West Harrison Street • Chicago, Illinois
DIVISION OF THE BLACKSTONE MANUFACTURING COMPANY

For more details circle NED-2727 on enclosed inquiry slip

The World's Most Efficient
CONCRETE DRILL

THE TILDEN ROTARY KONKRETE KORE DRILL

gives lowest cost per foot of concrete drilled because it:

- Drills at 2 to 6 inches per minute
- Drills reinforcing bars and beams in concrete
- Drills up to 30 feet of concrete without resharpening
- Gives straight, clean holes for anchors, conduit, etc.
- Uses ordinary electric drill

Quiet cutting action gives minimum disturbance of surrounding activities.

Tilden drill bits are available in standard sizes of from ¼" to 4" diameters. Quotations on larger sizes on request.

New, exclusive "centerless" design of drills from ¼" through 7/16" diameters is 3 to 4 times more efficient than ordinary pointed drills. Concrete is penetrated faster with 80% less pressure. Prices on these drills have been reduced by as much as 50%.

Write today for catalog
with complete details on these revolutionary concrete drill bits.

TILDEN TOOL MANUFACTURING COMPANY
1995 NO. FAIR OAKS, PASADENA 3, CALIFORNIA

For more details circle NED-2728 on enclosed inquiry slip

Be Sure Your
HACKSAWS, BAND SAWS and BAND KNIVES
are backed by the name
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...des or bands bearing ...Starrett name must ...hold the Starrett reputation. You ...extra assurance of top performance, uniformity and maximum cutting economy when you ...ify hacksaws, band saws and ...d knives precision made by the ...orld's Greatest Toolmakers."

NEW Starrett Hacksaw and Band Saw Catalog helps you choose the right hacksaw or band saw for any cutting job.

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MECHANICS' HAND MEASURING TOOLS AND PRECISION INSTRUMENTS · DIAL INDICATORS · STEEL TAPES · HACKSAWS BAND SAWS AND BAND KNIVES (PRECISION GROUND FLAT STOCK)
Buy Through Your Distributor

THE L. S. STARRETT CO. · *World's Greatest Toolmakers* · ATHOL, MASSACHUSETTS, U.S.A.

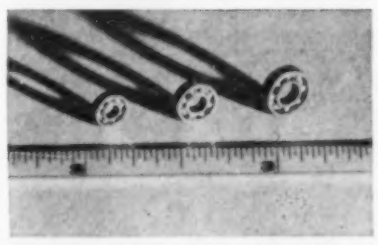
For more details circle NED-2729 on enclosed inquiry slip

FOOT TREADLE SWITCH
compact unit is double-throw type

Usable on equipment where forward and reverse motor operation is required, Twin Compact foot treadle switch consists of pair of small switches mounted on cast aluminum base. To prevent accidental operation of both switches at one time, there is sturdy bridge between them. Actuating mechanism will not foul and is extremely sensitive. Housing is of heavy gage steel with black crackle finish. Unit has cork composition nonskid base and weighs only 18½ oz. Made by **Simonds Machine Co.**, P. O. Box 261, Southbridge, Mass.

For more details circle NED-2730 on enclosed inquiry slip

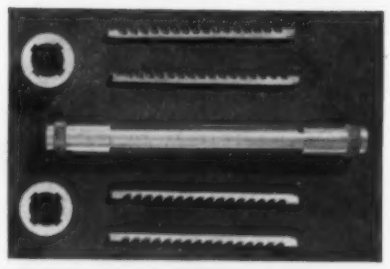
RADIAL BALL BEARINGS
miniature units offered in 12 sizes



Designated as RO series, these annular miniature ball bearings are made in same sizes as present R series precision bearings but are much lower in cost. Sizes start at 0.0295-in. bore and 0.1181-in. OD. Furnished with ball retainers, bearings have no filling slots and hence are suitable for both radial and thrust loads. They are usable for applications where high precision is not prime factor and where space-saving and economy are desired. Made by **Landis & Gyr, Inc.**, 102 Fifth Ave., New York 11, N. Y.

For more details circle NED-2731 on enclosed inquiry slip

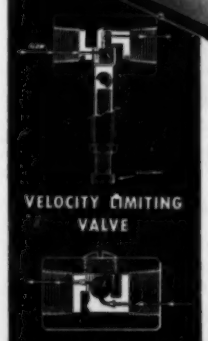
PUSH BROACH
cuts up to four keyways in one pass



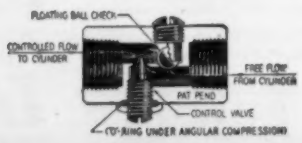
Suitable for use with hydraulic, air or hand operated presses, Glenny LK-4 push broach facilitates production cutting of one, two, three or four precision keyways. Milled slots in broach body which contain cutting blades are accurately located at 90-degree intervals. Illustrated 1-in. diameter broach is used to cut four ¼-in. wide by ⅛-in. deep keyways in one pass through workpiece. Broaches can be furnished in diameters from ¾ to 2½ in., in 1/32-in. increments. Blade widths range from 3/16 to ⅝-in. Interchangeability of blades permits cutting of different size keyways with one tool and substituting replacement blades when resharpening is necessary. Made by **Kase Machine Co.**, 18434 Buffalo Ave., Cleveland 19, O.

For more details circle NED-2732 on enclosed inquiry slip

FLOW CONTROL VALVE for Cylinder Speed ADJUSTMENTS over a WIDE RANGE IN AIR OR HYDRAULIC USE



The Pneu-Trol Flow Control Valve combines an efficient Stainless Steel FLOATING BALL CHECK which opens and closes at the slightest change in flow direction, with a Vernier Type VARIABLE NEEDLE ORIFICE adjustment in a compact control which has widened air and hydraulic cylinder application by providing precise control of cylinder action. Modifications of the Pneu-Trol Valve are available as Plain Check, check with Fixed Orifice (orifice drilled by customer in the Standard Check Valve), Needle Valve and Velocity Limiting Check, as illustrated at left. All Pneu-Trol Valves are made from bar stock in brass (up to 1000 psi) or steel (5000 psi) or other body metals to your specifications. All internal parts are Stainless. All valves available in 5 sizes—⅛", ¼", ⅜", ½" and ¾". Attractive prices—immediate delivery. Write for illustrated circular and price list.



WRITE . . . **Pneu-Trol Devices, Inc.**
3122 N. California Ave. Chicago 18, Ill.

For more details circle NED-2733 on enclosed inquiry slip

Profit next winter from this winter's CHILLS and BILLS

Thermolier Unit Heaters are the most economical answer to many tough heating problems. Easy to install and to relocate at any time to meet changes in plant layout or heating requirements. Waste no valuable floor or wall space. Aim heat where you need it. You pay only for heat you use . . . instead of banking heat wastefully up at the ceiling. Heat is turned on and off by throwing a switch, manually or automatically by simple thermostatic controls. Thermoliers have a patented internal cooling leg which permits use of inexpensive, simple thermostatic trap. Write for fully descriptive catalog.

THERMOLIER
Unit Heaters
GRINNELL

Grinnell Company, Inc., Providence 1, R. I. Warehouses: Atlanta • Buffalo • Charlotte Chicago • Cleveland • Fresno • Kansas City • Houston • Long Beach • Los Angeles • Milwaukee • Minneapolis • New York • Oakland • Philadelphia Pocatello • Sacramento • St. Louis • St. Paul • San Francisco • Seattle • Spokane

For more details circle NED-2734 on enclosed inquiry slip

The New
COMPACT
ELECTRIC ROTARY ACTUATOR

SIDE MOUNTING
WEIGHT: 2.25 lbs.

Trim Trol

The new TRIM TROL is now greatly reduced in size and weight without sacrificing capacity or performance. Developed from the original models, which have enjoyed wide acceptance, these new units are available with the two mounting arrangements illustrated.

- Static Capacity—1500 inch pounds, min.
- Operating Load Capacity—350 in. lbs. (Std. Ratio)
- Position Transmitter or Potentiometer Built In.
- Compliance with all applicable specifications.

POSITIONING CONTROL or electrical synchronizing available with our "SERVOSYN" unit.

"LEADING EDGE" MOUNTING

NOW ALSO AVAILABLE
110 VOLT - 60 CYCLE SINGLE PHASE AC

AIRBORNE
ACCESSORIES CORPORATION
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W. N. WRIGHT • DALLAS, TEXAS
The Ontario HUGHES OWENS CO. LTD. • OTTAWA, CANADA

For more details circle NED-2735 on enclosed inquiry slip

CUT COSTS WITH COMPLETE UNDERCARRIAGE ASSEMBLIES

For Portable
AIR COMPRESSORS
PUMPS • HEATERS
WELDING UNITS
CONCRETE MIXERS
SPRAYERS
SPREADERS
PORTABLE TANKS
PAINTING EQUIPMENT
FARM AND ROAD MACHINERY
BOAT TRAILERS
LIVESTOCK BODIES
AIRPORT AND PUBLIC UTILITY EQUIPMENT

Eliminate the time and labor wasting of buying and assembling separate parts to build a makeshift undercarriage.

Get precision engineered undercarriage construction ideally suited for your individual transport needs.

Let us analyze your requirements and send you an engineering recommendation for your portable equipment.

FAYETTE
Precision Built
UNDERCARRIAGES

Write for information on straight axle steering assembly.

FAYETTE MANUFACTURING COMPANY, 410 FRONT STREET, FAYETTE, OHIO

▲ For more details circle NED-2737 on enclosed inquiry slip ▲

You can lift heavy loads 13 times as fast with a Whiting electric hoist as you can with a hand hoist. Skilled workers and expensive machines can be released for productive work, and usually, the Whiting hoist will pay for itself in a very few months.

Workers are enthusiastic about Whiting hoists, too, as they eliminate the danger of rupture and strained muscles.

Whiting hoists have a unique, double worm-gear drive that provides smooth, silent power and makes possible amazing simplicity. They will last longer because they have fewer wearing parts than any electric chain hoist.

WHITING
Builders of Cranes, Monorail Systems and **ELECTRIC HOISTS**

Write for Bulletin H-100B

WHITING CORPORATION
15660 Lathrop Ave., Harvey, Illinois

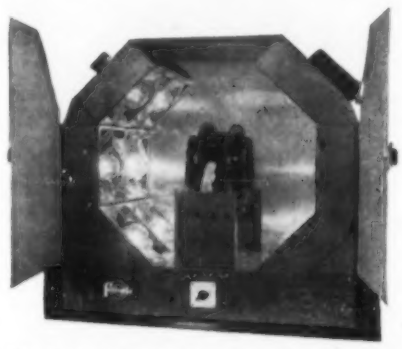
☐ Send me a copy of your Bulletin H-100B.
☐ Send me the name of the Whiting distributor in my locality.

NAME _____
STREET ADDRESS _____
CITY _____ STATE _____

▲ For more details circle NED-2738 on enclosed inquiry slip ▲

INFRARED OVEN
speeds motor repair operations

Because of short time cycle required and low operating cost, model 72-648 infrared oven is especially adaptable to baking and drying-out of motors. For example, fractional horsepower motors can be baked-out in less than 45 minutes, and armatures or stators of 1 to 5-hp motors can be done in 1 hour. Oven is equipped with off-on switch, high-low switch and temperature recording device or time control.

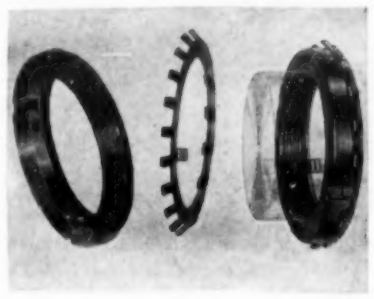


Made by **Fostoria Pressed Steel Corp.**, 1240 Harris Rd., Fostoria, O.

▲ For more details circle NED-2739 on enclosed inquiry slip ▲

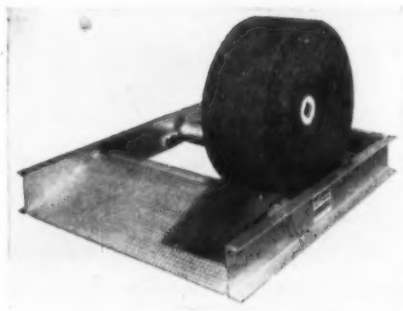
BEARING POSITIONERS
consist of lock nuts and washers

Effective locking of ball and roller bearings in correct position on shafts of $\frac{5}{16}$ to $7\frac{11}{16}$-in. diameter is afforded by these bearing positioning locknuts and lockwashers. Conforming to ABEC and SAE standards, precision-built units are installed and removed easily, rust-resistant, vibrationproof and burr-free. Made by **Link-Belt Co.**, Dept. NED, 307 N. Michigan Ave., Chicago 1, Ill.



▲ For more details circle NED-2740 on enclosed inquiry slip ▲

CABLE REEL DOLLIE
accommodates 20-in. to 8-ft rolls



Handling of wire, cable, rope, belting, fence, carpeting and other rolled products is facilitated by lightweight steel cable reel dollies. Two-ton capacity model is built on 29-in. wide frame with two 5 x 25-in. rolls mounted on 1-in. ball bearing shafts. Dollie having 4-ton capacity is built on 47-in. wide frame with two 5 x 41-in. rolls mounted on $1\frac{1}{4}$-in. ball bearing shafts. Both are supplied with ramp of heavy floor plate steel and have rear wheel which is adjustable to accommodate rolls of varying diameters. Locking pins on front rolls facilitate loading and unloading. Made by **Metzgar Co.**, 416 Douglas St. N. W., Grand Rapids 4, Mich.

▲ For more details circle NED-2741 on enclosed inquiry slip ▲

Did you know that **SHIMS CAN BE MADE ADJUSTABLE?**

to cut machining costs... to save assembly time

Laminated shims, stamped from sheets of *LAMINUM**, are adjustable. Laminations of .002 or .003 inch brass or steel simply p-e-e-l off with a penknife, right at the job!

HERE ARE THE ADVANTAGES:

1. No more filing or precision machining or grinding. Laminated shims can take care of increased component tolerances.
2. No fumbling or counting loose shims. The pack is bonded together although it peels easily.
3. No dirt, oil, grease between shim layers. Shim is always uniform in gauge, clean and smooth as glass.
4. Actually less compressible than stacked or one-piece shims.
5. No standby lathe or operator—no new skill required.
6. Can be fitted with babbitted lugs to prevent oil or pressure loss.

FOR PRECISION ADJUSTMENT OF SPLIT BEARINGS, GEAR MESH, END-PLAY—ACCURATE SPACING OF MACHINERY COMPONENTS.

Send today for our new data file with specifications, design factors and applications. Sample of LAMINUM included.

LAMINUM
THE SOLID SHIM THAT *peels* FOR ADJUSTMENT

**LAMINUM* (Reg. U. S. Pat. Off.) shims are solidly bonded units made up of .002 or .003 inch brass or steel laminations with a microscopic layer of metallic binder. Cut to your exact blueprint specifications.

LAMINATED SHIM COMPANY, Inc.
2304 Union Street Glenbrook, Conn.

SHIMS • SHIM STOCK • STAMPINGS • AN-COR-LOX NUTS

▲ For more details circle NED-2742 on enclosed inquiry slip ▲

Geneva
ECONO-MOLD
RUBBER TIRED
CAST WHEELS

GENEVA ECONO-MOLDS ARE FURNISHED AS COMPLETE UNITS with solid rubber tires already molded to the wheels. They feature lightweight, durability, low cost and engineered metal distribution. These semi-steel wheels are furnished with molded-on rubber tires in the following sizes:—6"x1¾", 6"x2", 7"x2", 8"x2", 8"x2½", 10"x2½", 12"x2½", and 12"x3". Wheels are also furnished with many hub lengths and types of bearings for ¾" to 1¼" spindle sizes.

SEND FOR BULLETIN 1249

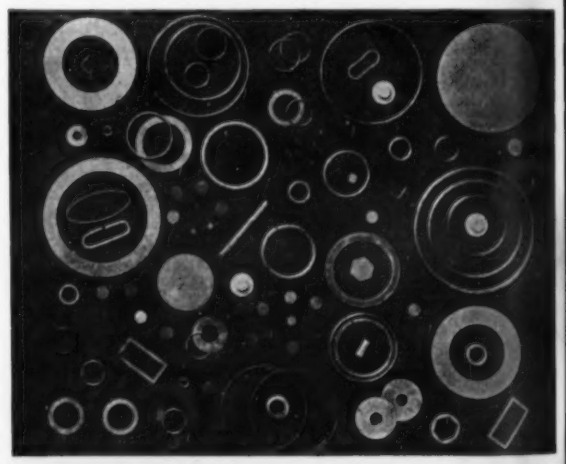
GENEVA WHEEL CO.
1254 RAILROAD ST.
GENEVA, OHIO

50 YEARS OF WHEEL DESIGNING AND MANUFACTURING

▲ For more details circle NED-2743 on enclosed inquiry slip ▲

KRE-CO PREPLACED BRAZING ALLOYS LOWER JOINING COSTS

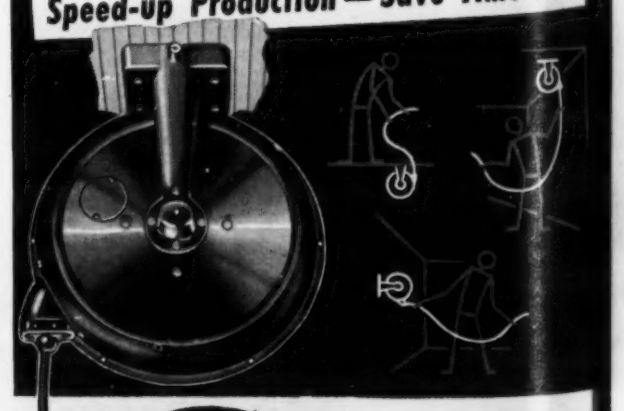
For speedier production and leak-tight joints stronger than the parent metal. Made from Easy-Flo, Sil Fos, Copper, Phos Copper, Bronze, Soft Solder and Aluminum in rings, disks, flat washers, stampings, and special shapes and sizes to meet all requirements. Speedy deliveries in any quantity. Interesting quotations. Tell us to present facts and figures to lower your brazing costs.



CHARLES W. KRIEG COMPANY
48-60 Dickerson St. - HUmboldt 5-2000 - Newark 4, New Jersey

▲ For more details circle NED-2744 on enclosed inquiry slip ▲

Cut Air-Hose Costs — Prevent Accidents
Speed-up Production — Save Time...



with **CHAMPION AIR-HOSE REELS**
FOR CEILINGS—WALLS AND FLOORS

Champion Air-Hose Reels more than pay for themselves in the hose they SAVE. Champion Reels keep hose *off-the-floor*, eliminate the danger of tripping. Air-hose is always convenient to operator... time saver that speeds-up production. Stays put at desired length—a slight pull rewinds hose at governed speed. Fully enclosed reel housing with swivel or stationary mounting. Furnished with 30 or 3[illegible] foot hose. Write TODAY for complete data sheet.

CHAMPION PNEUMATIC MACHINERY CO
837 NORTH PLEASANT STREET • PRINCETON, ILLINOIS

▲ For more details circle NED-2745 on enclosed inquiry slip ▲

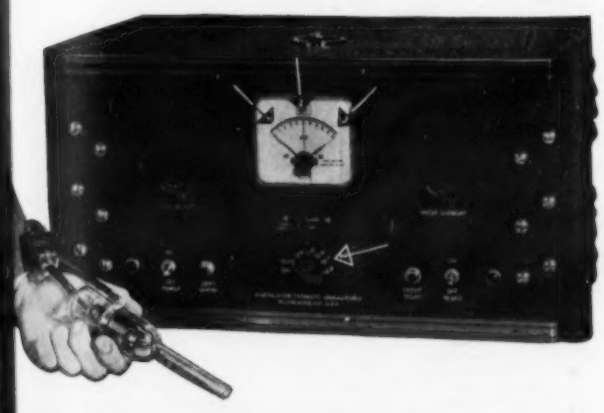
IMPROVED MODEL McCORD UNIT HEATER

The improved McCord Unit Heater incorporates every unit heater advancement that McCord engineers and the experience of thousands of users could suggest. The distinctive modern design with rounded corners combines improved appearance with greater strength and houses a heating unit that sets a new standard of heat transfer efficiency and quietness. The scientific design of the individual turbo spiral fin tube core provides even distribution of heated air at high velocity. The individual tubes prevent stresses due to unequal expansion. The entire heating unit is spring suspended and floats free in the casing eliminating rigid connections. Deep pitched fans provide high air delivery and quietness of operation.

This improved heater is a development of the experience gained from the thousands of McCord Unit Heaters in service. It combines good appearance with that inherent McCord quality of ruggedness and dependability that has made McCord the standard among many of the largest industrial users. You may also replace old leaking heaters using new McCord units and your old fan and motor. Write for new catalogs—Unit heaters and blast coil units. **McCord Corporation,** 2580 E. Grand Blvd., Detroit, Mich. —Advt.

For more details circle **NED-2746** on enclosed inquiry slip

DPi announces a new gauge for highest vacuum



THE DPA-38 IONIZATION GAUGE CONTROL CIRCUIT BRINGS YOU 3 BIG NEW FEATURES

1 Increased Sensitivity of the Circuit
Now the lowest scale division represents 2×10^{-9} mm. Hg. The highest vacua can be easily and accurately measured, particularly the difficult range below 10^{-7} mm. Hg.

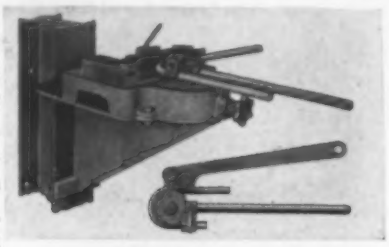
2 New Direct-Reading Scale
The negative exponent of the number of millimeters of mercury is read on the range selector and the coefficient is read on the dial gauge.

3 Heavy-Duty Adjustable Automatic Relay
protects maximum life of the VG-1A Ionization Gauge Tube. A contact point that can be set at any position along the needle swing automatically operates the relay to turn off the ionization tube filament and close an external circuit.

For prices or more complete information, write
VACUUM EQUIPMENT DEPARTMENT
DISTILLATION PRODUCTS *industries*
763 RIDGE ROAD WEST, ROCHESTER 3, N.Y.
Division of Eastman Kodak Company
Distillers of Oil-Soluble Vitamins and other Concentrates for Science and Industry; Manufacturers of High Vacuum Equipment

For more details circle **NED-2747** on enclosed inquiry slip

TUBE BENDERS
three types cover 1/4 to 1 1/4-in. range



Suitable for production or intermittent use, these benders are capable of forming soft copper, brass, aluminum or fully annealed steel tubing to desired angles. Shapes can be bent with special radius blocks. Bench bender covers range from 3/8 to 1 1/4-in. tube and can be post, bench or stand mounted. Hand models Nos. 38 and 39 cover ranges of 1/4 to 1/2-in. and 5/8 to 3/4-in., respectively. Made by **Republic Mfg. Co.,** 1928 W. 77th St., Cleveland 2, O.

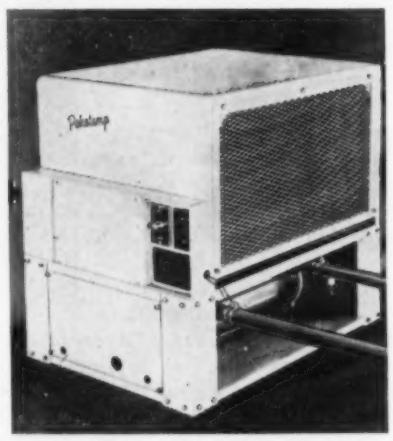
For more details circle **NED-2748** on enclosed inquiry slip

STAINLESS STEEL CONTAINER
holds variety of liquid chemicals

Made of Armco type 304 stainless steel, this Lee container is strong, long lasting and easily cleaned. It is recommended for handling syrups, flavors, oils and extracts. Container has capacity of 15 gal, weighs 27 lb and has depressed hand holds in top chime for easy handling. Cap is of double construction, provided with wrench fittings and is permanently chained to container. Features include permanent identification by stamping user's name on top chime, reinforced runners, rigid chime design and spherical bottom to permit complete draining of contents. Made by **Steel Cooperage Co.,** Dept. AS, 4801 Bellevue Ave., Detroit 7, Mich.

For more details circle **NED-2749** on enclosed inquiry slip

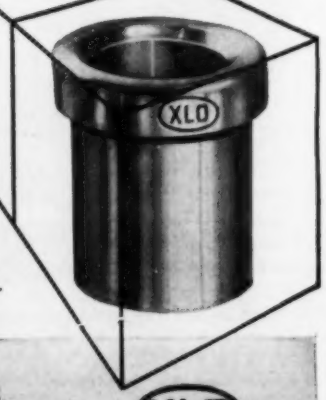
FLUID TEMPERATURE CONTROLLER
maintains temperatures within 1/2° F



Tempering liquid is circulated rapidly by Pakotemp device through jacket or tempering panels surrounding critical fluid. Stainless steel heat exchanger automatically provides heat or refrigeration as required to hold temperature of critical fluid within predetermined limits. Since tempering liquid is force-circulated through closed circuit, extremely small temperature changes are corrected. All thermostatic and electrical controls are conveniently located on unit, and only one electrical connection and two noncorrosive plumbing connections are required. Made by **Pako Corp.,** 1010 Lyndale Ave. N., Minneapolis, Minn.

For more details circle **NED-2750** on enclosed inquiry slip

PRECISION IN A SMALL PACKAGE



EX-CELL-O precision means longer life . . . more accurate performance . . . greater economy in DRILL JIG BUSHINGS. For list of large stock of A.S.A. standard sizes available, write for your copy of Ex-Cell-O Bulletin No. 11882-B.

49-3

XLO
EX-CELL-O for PRECISION

EX-CELL-O CORPORATION
DETROIT 32, MICHIGAN

For more details circle **NED-2751** on enclosed inquiry slip

Jacketed Pipe and Fittings

Jump-over pipes prevent heating (or cooling) medium from entering process pipe.

NOW AVAILABLE IN SPECIAL METALS FOR HANDLING CORROSIVE MATERIALS

H & B Jacketed Pipe and Fittings, which have been used for years in processing non-corrosive materials, are now available in cast or welded steel, or stainless steel if required, for handling corrosive materials. In any processing operation where the maintenance of a uniform temperature in the process pipes is essential, an H & B Jacketed Pipe System will assure dependable, economical processing. We welcome inquiries on the handling of either corrosive or non-corrosive materials. Illustrated Bulletin S-47 will be sent on request.

HETHERINGTON & BERNER INC.
751 KENTUCKY AVENUE • INDIANAPOLIS 7, INDIANA

For more details circle **NED-2752** on enclosed inquiry slip

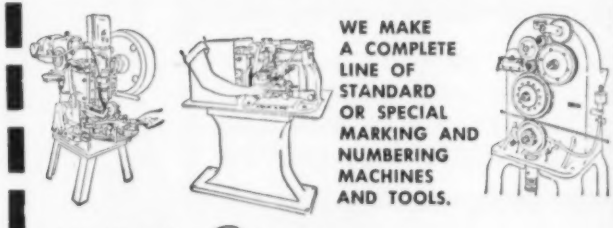
JOB MARKING

OF YOUR { PRECISION AND NON-PRECISION PARTS

OF { IRON, STEEL, BRASS, ZINC, COPPER, ALUMINUM, FIBRE, WOOD or PLASTIC

THEY MAY BE { Cast, Die-Cast, Machined, Tooled, Polished, Enameled, Stamped, Formed or Molded

IT'S LOGICAL THAT THE MAKERS OF MARKING AND NUMBERING MACHINES SHOULD DO YOUR MARKING



WE MAKE A COMPLETE LINE OF STANDARD OR SPECIAL MARKING AND NUMBERING MACHINES AND TOOLS.

LET US BID ON YOUR ENGRAVING AND MARKING

The ACROMARK Company
7-11 MORRELL ST., ELIZABETH 4, N. J.

For more details circle **NED-2753** on enclosed inquiry slip

AMERICAN PRESSED-STEEL HAND TRUCKS

-built like a Motor Truck Frame!

American Hand Trucks give you built-for-life durability. Their channel section pressed-steel side rails and cross bars — made like motor truck frames—are no heavier than wood! Perfectly balanced for easy handling.

50 MODELS AND SIZES

The American Pulley Company
4294 WISSAHICKON AVE., PHILADELPHIA 29, PA.

Please mail free American Hand Truck Catalog

NAME _____
COMPANY _____
ADDRESS _____
CITY _____ ( ), STATE _____

For more details circle **NED-2754** on enclosed inquiry slip

Shredded Paper

IS THE IDEAL PACKING MATERIAL

produce it yourself for . . .

(1) Real dollar & cents savings
(2) Minimum inventories
(3) Substantial space savings
(4) Dependable supply

Test a "Silver" paper shredder in your own shop without obligation—Get complete details by writing *today* to:

INDUSTRIAL SHREDDER & CUTTER CO.
107 Mill Street Salem, Ohio

For more details circle NED-2755 on enclosed inquiry slip

Titan ELECTRIC HOIST

Light, compact, easily moved about. Plug it in most anywhere; available for single or three phase electric current.

The little hoist with Big Hoist Construction; has Steel Wire Hoisting Rope—not chain; Cone Worm Drive, Electric Solenoid Brake, Automatic Hook Travel Limit Stop, Push-Button Control.

BUILT TO STAY ON THE JOB

The Titan is a precision built hoist, built to handle full load without strain, falter or failure. Built to eliminate maintenance and repair parts and out-of-service time. Built to a Quality Standard that eventually gives most for *your* money.

PROVEN ON THE JOB

A quote from a Titan User: "3 times its cost recovered in less than two years use; no repairs or replacements."

LOTS OF PLACES WHERE TITAN HOISTS CAN SAVE MONEY

Most every plant has spots where a Titan will pay back its cost in a short time. They are doing it daily.

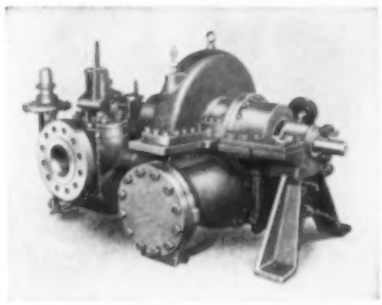
Investigate the Titan Hoist
Write for Bulletin 801A

DETROIT HOIST & MACHINE CO.
8214 Morrow St., Detroit 11, Mich.
Request for Bulletin 801A

Company _____
Address _____
City _____ State _____

For more details circle NED-2756 on enclosed inquiry slip

SINGLE-STAGE TURBINE
designed for high pressure service and initial temperatures to 950° F

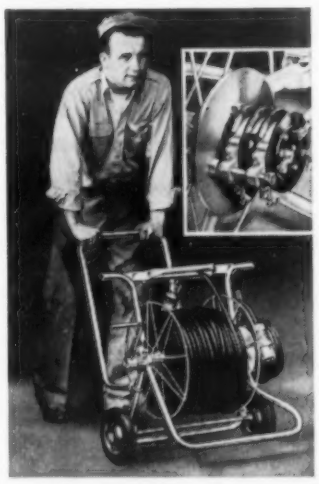


Applicable for initial pressures to 1450 psi and back pressures to 300 psi, model CP single-stage mechanical drive turbine has labyrinth shaft seals. These consist of series of shaft grooves and mating tongues of stainless steel packing. Number of labyrinths in shaft depends upon exhaust pressure rating; as many as 52 labyrinths per side are employed for highest pressures.

To provide for extreme thermal expansion encountered in high temperature service, turbine is supported at true centerline, and front end is mounted on flexible channel. This permits both radial and axial expansion to take place without disturbing shaft centerline. Turbine can be furnished with any of eight types of governors including mechanical shaft, vertical flyweight with or without oil relay, hydraulic with or without oil relay, pressure governors for pump and blower drives and auxiliary tripping devices. Operating independently of governing system, separate trip gives positive protection against overspeeding. Turbine is made in three sizes with ratings up to 2000 hp. Made by **De Laval Steam Turbine Co.**, 301 Nottingham Way, Trenton 2, N. J.

For more details circle NED-2757 on enclosed inquiry slip

POWER CABLE REEL
aids handling and reduces wear



Constant-contact collector ring of Powereel cable reel permits winding or unwinding of cable without interrupting service. It is rated 75 amp at 220 v and can be used with any phase current. Capacity of reel is governed by size of cable used. Welded tubular steel sled runners facilitate moving reel about job location. They are at right angles to direction of rotation to prevent slipping when cable is unwound. Collector rings are of heavy beryllium copper with double brushes seated in phenolic casting and housed in metal. Three or four collector rings are supplied as standard equipment. Screw binding posts facilitate attachment of cable. As optional equipment, two-wheel hand truck consisting of handlebar and separate axle with two rubber-tired wheels is available. When reel is used without hand truck, combination twin handle and cord guide allow two-man handling. Made by **Industrial Electrical Works**, Dept. A-73, 1509 Chicago St., Omaha 2, Nebr.

For more details circle NED-2758 on enclosed inquiry slip

FOR BETTER, SAFER STACKING

The versatility of the Wirebound principle—the strength of steel combined with thinner wood—permits variation of wire gauges, staple spacing, battens and cleats to provide safe structural strength for large and small containers to meet all warehousing requirements. Note*

USE **Wirebound BOXES & CRATES** FOR LOWER TOTAL SHIPPING COSTS

60 Wirebound Plants throughout the United States

***Send for this free book!** *Explains in detail Wirebound principles, advantages, features and describes how Wirebounds are designed to suit every size and shape of product. Mail coupon today.*

Wirebound Box Manufacturers Assn., Room 1828, Borland Bldg. Chicago 3, Ill.

☐ Send Booklet of Product Information ☐ Send a Sales Engineer

NAME _____
COMPANY _____ ADDRESS _____
CITY _____ ZONE _____ STATE _____

For more details circle NED-2759 on enclosed inquiry slip

KUSHION-TORK
WHAT IT WILL DO FOR YOU

The Cushion Torque of Kanti-Lever Couplings absorbs the hammer blows of sudden or reversing loads and dampens the torsional and radial vibration that cause wear, fatigue and sometimes failure of Motors, Speed Reducers, Ball Bearings, and productive machinery. No other coupling is like the Kanti-Lever: It has a circular series of laminated Cantilevers of 200,000 lb. steel, operating in slots, the tapered sides of which automatically stiffen the Cantilevers under increased overloads. Special end-play up to four inches is possible without end thrust. The outer periphery of the Kanti-Lever is available as a brake drum for quick-stopping or reversing machinery. Send for Bulletin No. 28-D.

Kanti-Lever Couplings

4,000,000 h. p. in Use

MFGRS. OF SECTIONAL STOCK RACKS

BROWN ENGINEERING CO.
129 N. THIRD ST. READING, PENNA.
RACKS • VISES • CLUTCHES • COUPLINGS

For more details circle NED-2760 on enclosed inquiry slip

STURTEVANT Laboratory Machines Assure Quality of Products
Fast-Economical-Accurate

Sturtevant Laboratory Equipment meets the exacting requirements of laboratory work. They are fast and accurate...provide true samples. Rugged and dependable, Sturtevant equipment actually has all the features of full size machines plus extra accuracy and wider range of adjustment. The "Open-Door" accessibility permits quick, thorough cleaning . . . prevents the possibility of previous batches from contaminating new samples.
Investigate Sturtevant equipment for your laboratory. Write for complete details and catalog.

STURTEVANT MILL COMPANY
114 CLAYTON STREET, BOSTON 22, MASS.

For more details circle NED-2761 on enclosed inquiry slip

THE NEW HALLOWELL "700" Steel Platform Trucks

All-steel body eliminates excess weight, permits heavier loads per truck.

Heavy-duty construction lengthens truck life, reduces maintenance costs to the vanishing point.

New, functional design increases strength, provides better load distribution, makes handling easier.

Write for your copy of Bulletin 718.

HALLOWELL
MATERIALS HANDLING EQUIPMENT
See us at Space 128, A.S.T.E. Exposition, April 10-14, Convention Hall, Philadelphia

SPS STANDARD PRESSED STEEL CO.
JENKINTOWN 24 PENNSYLVANIA

For more details circle NED-2762 on enclosed inquiry slip

PIPE AND BOLT THREADERS

New Line! 4 Models! 4 Choices!

No. 782 PIPE THREADER
Stationary Die-Head
PIPE range ¼" to 2"
BOLT range ¼" to 1½"

No. 782-R PIPE THREADER
Revolving Die-Head
(Manually Operated) and Open-Type Vise Same range as No. 782 model.

No. 781-A BOLT THREADER
Automatic Revolving Die-Head
and Open-Type Vise
BOLT range ¼" to 1½"
PIPE range ¼" to 1¼"

No. 782-A BOLT THREADER
Automatic Revolving Die-Head
and Open-Type Vise
BOLT range ¼" to 1½"
PIPE range ¼" to 2"

The "RAPIDUCTION JR." Line

Basic features of these machines are the same. They differ chiefly in the type of Die-Heads and Work Holders.

Each "RAPIDUCTION JR." model is designed for a PRIMARY purpose. When YOUR exact needs are known, it's EASY to select the BEST machine to fit the job. Write us for complete details.

OSTER **THE OSTER MFG. COMPANY**
2066 E. 61st St., Cleveland 3, Ohio, U.S.A.

▲ For more details circle **NED-2763** on enclosed inquiry slip ▲

The Men with the Holes in their Heads!

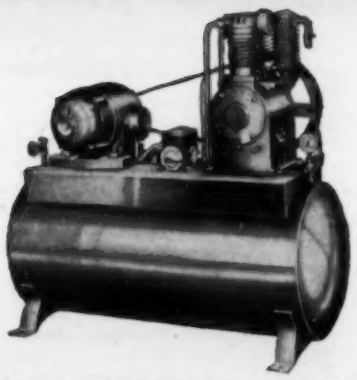
Big holes! Little holes! Deep holes! How can we bore 'em better for less? This may be your problem occasionally. But boring holes at lower cost is the full time problem for Madison engineers. This specialization can save *you* money just as it is doing every day for leading manufacturers. Why not take advantage of the two big things — Madison experience and Madison tools — that can cut cost on your production boring jobs. You're welcome to put another hole in one of our engineers' heads. Ask them to consider your problem and come up with a cost lowering idea. No obligation, of course. *Write for the information filled Madison Catalog.*

BETTER BORING TOOLS . . . MORE BORING EXPERIENCE

MADISON MANUFACTURING COMPANY
Dept. ED Muskegon, Michigan

▲ For more details circle **NED-2764** on enclosed inquiry slip ▲

SCHRAMM
AIR COMPRESSORS



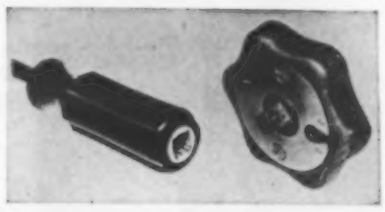
MOTOR DRIVEN COMPRESSOR OR HORIZONTAL TANK

SCHRAMM small industrial compressors are built in sizes ranging from ⅓ to 5 h.p., single and two stage sizes. Larger size units available in displacements up to 600 cubic feet. Write for Bulletin GC-48.

SCHRAMM INC. THE COMPRESSOR PEOPLE WEST CHESTER PENNSYLVANIA

▲ For more details circle **NED-2765** on enclosed inquiry slip ▲

RATCHET SCREWDRIVER
palm-grip insert increases torque



Ample torque for tightening or loosening even stubborn screws is afforded by palm-fitting ratchet wheel which fits readily in standard ⅜-in. steel socket molded in end of Tenite handle of this Palm-Grip screwdriver. Cast aluminum reversing ratchet wheel can also be used with adapters to drive ¼ to ½-in. socket wrenches. Screwdrivers are available in three sizes to fit ¼ to ½-in., Nos. 6 to 12 and Nos. 1 to 5 screw slots. Blades are tool steel. Made by **Kipton Industries,** Dept. NED, P. O. Box 96, Kipton, O.

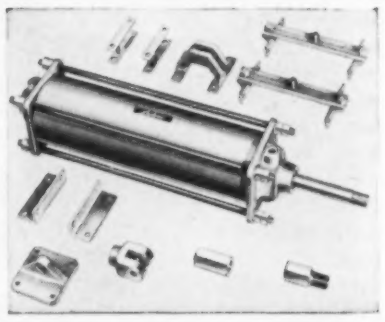
▲ For more details circle **NED-2766** on enclosed inquiry slip ▲

EXPLOSIONPROOF SUMP PUMP
has nominal capacity of 4000 gph

Capable of delivering rated capacity against 23-ft discharge head, series MC sump pump utilizes copper and bronze construction throughout. It is Underwriters' approved for hazardous locations that include atmospheres containing metal dust, carbon black, coal or coke dust, gasoline, alcohol, solvent vapors and natural gas. Motor leads are connected to switch terminals through threaded conduit as required by National Electric Code, and switch housing has ½-in. pipe size threaded outlet for connection to line. Pump is built in five lengths for sump depths of 2, 3, 4, 6 and 8 ft; and all sizes can be obtained for 110/220-v 60-cycle current. Made by **Penberthy Injector Co.,** 1242 Holden Ave., Detroit 2, Mich.

▲ For more details circle **NED-2767** on enclosed inquiry slip ▲

AIR & HYDRAULIC CYLINDERS
tie-rod construction prevents leaks



Medium duty series of air and hydraulic cylinders is applicable to remote control operation, material handling, clamping or holding and other uses where straight line motion is required. Tie-rod construction gives positive protection against leakage at joint of tube and head, and chevron packing seals piston rod. Synthetic cups and automatic cushion are standard. Various head and rod attachments for these standardized cylinders provide for almost universal mounting requirements. Made by **Ledeen Mfg. Co.,** 1602 S. San Pedro St., Los Angeles 15, Calif.

▲ For more details circle **NED-2768** on enclosed inquiry slip ▲

Provide Easy Visibility with the NEW MODEL "CS" TOP READING COUNTERS

Available in STROKE and ROTARY Models

Designed for incorporation on original equipment. This is the only counter made in which the entire case is a single casting . . . provides greater rigidity, tighter seal of working parts and new streamlined contour. This unit is compact and rugged, and features a flush mounted window to assure greater visibility of easy-to-read numerals.

Send for "CS" Literature

DURANT MANUFACTURING COMPANY
1922 N. Buffum Street, Milwaukee 1, Wisconsin
122 Orange Street, Providence 3, R. I.
Representatives in Principal Cities

PRODUCTIMETERS SINCE 1879 *Speedometers* OF INDUSTRY

▲ For more details circle **NED-2769** on enclosed inquiry slip ▲

KEEP SUN GLARE OUT
...AND PROFITS IN WITH

RA-TOX WOOD SPLINT VENTILATING SHADES

Sun glare on walls, machines and work raises room temperatures, causes eye fatigue, lowers worker morale. Keep your plant at top efficiency with RA-TOX SHADES. Attractive, easy to operate, low cost, long wearing. Made in types and sizes for all types of industrial windows. Write for folder.

THE HOUGH SHADE CORPORATION
Industrial Division
1105 JACKSON STREET • JANESVILLE, WISCONSIN

▲ For more details circle **NED-2770** on enclosed inquiry slip ▲

MARKING COSTS DROP PLUMB

They plunge straight down to the "lowest cost per mark" . . . when you use a marking machine or tool properly designed by Matthews, leaders in Quality Marking Products Since 1850.

This unit . . . for example, is the Matthews "204". It marks up to 800 round, flat or contoured parts per hour . . . legibly, uniformly and safely.

Write Matthews today for complete information and literature on "Product Marking". Just send details of your product, and where and how you would like to mark it.

JAS. H. MATTHEWS & CO.
3943 FORBES ST., PITTSBURGH 13, PA.
NEW YORK BOSTON PHILADELPHIA CHICAGO
NEWARK SYRACUSE CLEVELAND CINCINNATI
DALLAS BIRMINGHAM LOS ANGELES

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DUST PROTECTION

YOUR WORKERS WILL WELCOME AND WEAR!

The New FLEX-A-FOAM FILTER MASK

The most remarkable advancement in dust-type respirators ever made!

NEW FEATHER-LIKE WEIGHT... weighs exactly one ounce.

NEW SNUG-FITTING COMFORT adjusts itself with comfortable snugness to every face size.

NEW FILTERING EFFICIENCY... purifies the air of non-toxic nuisance dusts as small as 1/25,000 of an inch.

NEW BREATHING COMFORT... it's easier to breathe and talk through than an ordinary pocket handkerchief.

THE LOWEST-PRICED QUALITY RESPIRATOR ON THE MARKET TODAY! Trial Sample $1.50 Post Paid

Write TODAY For Descriptive Circular

THE GOGGLE PARTS CO., INC.
1468-70 W. 9th STREET CLEVELAND 13, OHIO

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STOP MOISTURE DAMAGE

Kemp Dynamic Dryers solve moisture control problems—combine dependable operation with low operating cost!

YES, no two ways about it, Kemp Dynamic Dryers *control moisture* at rock bottom prices. For example, a Kemp unit drying gas may cost you as little as ¼ *cent per mcf!* And that ¼ of a cent includes *all* labor and utility costs—plus the cost of the equipment amortized over a five-year period! But low operation cost is just part of the Kemp story.

SIMPLE OPERATION

Kemp Dynamic Dryers are flexible . . . offer *manual, semi-automatic* or *automatic* operation. Desiccant is especially selected and compounded for the particular duty. Units are available for drying *air, gases* or *liquids* . . . for controlling humidity in large or small areas. Choose gas, electric or steam regeneration . . . with or without cooling units.

GUARANTEED PERFORMANCE

No matter what your moisture control problem may be . . . specify Kemp first. Chances are there is a standard design that will be ideal for your plant . . . and at the same time save you money! Performance to your specifications is guaranteed! For full information mail coupon for special bulletin.

KEMP OF BALTIMORE *DYNAMIC DRYERS*

CARBURETORS
BURNERS
FIRE CHECKS
ATMOSPHERE & INERT GAS GENERATORS
ADSORPTIVE DRYERS
METAL MELTING UNITS
SINGEING EQUIPMENT
SPECIAL EQUIPMENT

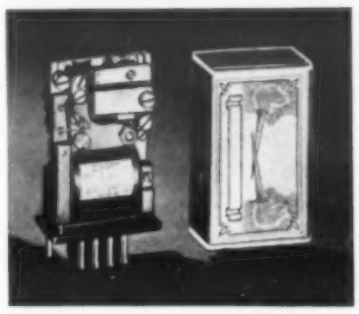
THE C. M. KEMP MFG. CO., Dept. B-4, 405 E. Oliver St., Baltimore 2, Md.

Gentlemen: Please send me information Bulletin D-27. We want the facts on drying ☐ air ☐ gas ☐ liquids.

Name.....
Company.....
Address.....
City..... Zone..... State.....

▲ For more details circle NED-2776 on enclosed inquiry slip ▲

POLARIZED RELAY
can repeat feeble signal impulses



Available in three sizes to meet varying needs, Carpenter polarized relay is capable of repeating feeble signal impulses of varying time duration with high accuracy and maintains this ability for long periods without attention. Type 5 illustrated is miniature relay weighing only 4.8 oz. It is of sturdy design with exceptional thermal stability. Distributed by **C. P. Clare & Co.,** 4719 W. Sunnyside Ave., Chicago 30, Ill.

▲ For more details circle NED-2777 on enclosed inquiry slip ▲

WELDING ELECTRODE
'cold welding' cast iron

Improved Eutectrode 24 welding electrode for cast iron requires less amperage than formerly. For example, 5/32-in. size which normally requires 120 to 125 amp can now be deposited readily on same thickness of metal at only 80 to 90 amp. Arc stability, rate of deposition and flatness of bead have been improved also and risks of stress and distortion reduced. Having tensile strength of 50,000 psi and Brinell hardness of 150 to 200, electrode is recommended for welding cast iron to cast iron or to cast steel and for repairing machining and foundry defects. It can be obtained in 3/32, ⅛, 5/32 and 3/16-in. sizes as standard and ¼-in. size for heavy castings. Made by **Eutectic Welding Alloys Corp.,** Dept. A-2, 40 Worth St., New York 13, N. Y.

▲ For more details circle NED-2778 on enclosed inquiry slip ▲

FUEL STORAGE TANK
for safe outdoor storage of 300 gal

Suitable for storage of gasoline, fuel oils or other liquids, this tank is made of 14-gage steel, has electric welded construction and is finished in baked-on red enamel. It is 3 ft in diameter by 5½ ft long and has frame which holds it 6 ft above ground. Platform provides for storage of extra fuel drums. Creosoted wood skids give firm foundation to frame and afford means for dragging assembly over short distance. Tank has 2-in. threaded opening on top, and magnetic float gage is inserted in 1¼-in. opening in end. At bottom is combination locking valve and sediment eliminator to which is attached 10-ft neoprene hose with static wire protector and full-flow nozzle. Made by **Bennett Industries,** Dept. ED, Washington & Lincoln, Peotone, Ill.

▲ For more details circle NED-2779 on enclosed inquiry slip ▲

flexible Production Marking $20

- Operates on electric hammer principle
- Eliminates etching grounds
- No costly dies or fixtures
- Ideal for constant heavy use
- Cool operation
- Length 5". Weight 14 oz.
- 5¼ lb impact 7200 times per minute
- Stroke regulated from 0 to ⅛"
- Light duty—$6

10 Day Trial Free

Write for our MACHINE TOOL ACCESSORIES Catalog.

MONTGOMERY & CO., Inc.
Since 1876

55 Park Place • New York City 7

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How CLEANLINESS is AUTOMATIC with BB WASTE RECEPTACLES

● Everybody is automatically a member of your cleaning department by conveniently placing Bennett Bilt Waste Receptacles to invite their use. *Put them to work for you today.*

Non-rusting stainless steel feet eliminate rusting; Extra heavy-gauge Mayari-R, Bethlehem's corrosion resisting steel; All-welded construction; Smooth exterior surface; Reinforced corners; Strong springs keep doors closed providing greater sanitation and eliminating fire hazards; Rounded corners for structural strength and appearance; Baked enamel finish—white or green.

These are a few of the many features that make these receptacles a natural "buy." Write for fully-illustrated catalog TODAY.

THE BENNETT MANUFACTURING CO. · ALDEN, N. Y.
CUSTOM METAL CRAFTSMEN SINCE 1906

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Multiply your machine services AT LOW COST!

Wide-V-belt series. Ratios to 3:1. Infinitely variable, slow or fast.

LOVEJOY Variable Speed PULLEYS

For duties fractional to 8 h.p. Available from stock. Easily installed with equipment old or new. Compact. Simple. Ruggedly built. Time savers! Money savers!

Ask for complete catalog.

LOVEJOY FLEXIBLE COUPLING CO.
5003 W. Lake St. Chicago 44, Ill.

Also Lovejoy Flexible Couplings, and Lovejoy Universal Joints.

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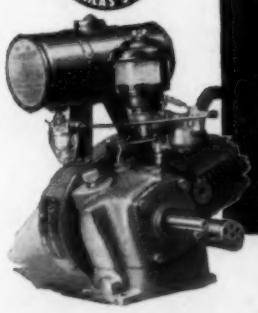
CONTINENTAL MOTORS · Powerful as the Nation · AMERICA'S STANDARD

Let these 1½ and 2 h.p. RED SEAL ENGINES BUILD GOODWILL FOR YOU, TOO



Where height is critical specify
AA-7
(1½ H.P at 2600 r.p.m.)
or
AA-7B
(2 H.P. at 3200 r.p.m.)

Where horizontal dimensions are critical, specify
AU-7
(1½ H.P. at 2600 r.p.m.)
or
AU-7B
(2 H.P. at 3200 r.p.m.)

●

Heavy-duty 6-to-1 reduction gear, mounting in any of 4 positions, also available.

Compactness, balance, and extremely low center of gravity adapt these engines to an unusually broad range of applications, a range widened further by the fact that identical performance characteristics are available in models of differing profile and shape.

Torque substantially higher than in other engines of their ratings assures ample reserve power for suddenly-applied loads. These Red Seals cost less to run, and run longer without service, because their full rated horsepower is developed at moderate speed.

Let these products of Continental Motors, engine specialists for nearly half a century, help sell your product—help KEEP it sold. Installation drawings and full information on request.

Continental Motors Corporation
620 FORD BUILDING, DETROIT 26, MICHIGAN

▲ For more details circle NED-2783 on enclosed inquiry slip ▲

HANSEN HOSE CLAMP

2 WAY GRIP RE-USABLE . . .

Easy to install, easy to remove for hose renewal. May be used over and over again. Ferrule with special internal left-hand thread holds outside of hose—right-hand stem thread locks inside. Long stem prevents cutting hose. Available for hose 3/16" to 3/4" I.D. with male or female pipe threads, or with swivel nut. All parts machined from solid brass rod.

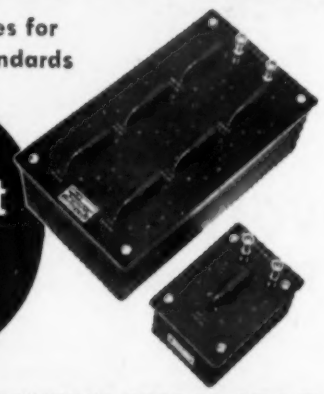
Write for catalog

THE HANSEN MANUFACTURING COMPANY
4031 WEST 150th STREET • CLEVELAND 11, OHIO

For more details circle NED-2784 on enclosed inquiry slip

SHALLCROSS DECADE RESISTANCE BOXES

1 to 7 dial types for laboratory standards



Widest assortment on the market!

OVER 40 TYPES AVAILABLE

Shallcross Decade Resistance Boxes are available from stock from 0.01 ohm to 11,111,110 ohms—in ranges, styles and prices to match your particular requirement. Write for Shallcross Decade Resistance Box Bulletin.

Shallcross Manufacturing Co.
Dept. D-40 Collingdale, Penna.

For more details circle NED-2785 on enclosed inquiry slip

4 REASONS DARTS DON'T DRIP

1. **EVERY DART . . . is** precision-machined to a true ball joint... then spherically ground to give wide, true-bearing surfaces. Reason why Darts are always leakproof.
2. **EXTRA-WIDE BRONZE SEATS . . .** resist pitting, electrolysis and corrosion . . . stay drop-tight.
3. **EXTRA-HEAVY SHOULDERS...** shrug off wrench abuse through dozens of installations.
4. **PRACTICALLY INDESTRUCTIBLE . . .** body and nut of air-refined, high test malleable iron resists stress, stretching and wrenching.

E. M. DART MANUFACTURING CO.
PROVIDENCE 5, RHODE ISLAND

For more details circle NED-2786 on enclosed inquiry slip

RUBBER COATED WORK GLOVE
affords firm grip on smooth surface

Gauntlet style has been added to Grab-It line of natural-rubber coated work gloves which provide hand protection along with good grip on slippery materials. Palm and thumb are coated with rough textured natural rubber which is chemically welded to strong fabric. Glove is highly resistant to abrasive wear and cutting action of sharp edged or rough surfaced materials and is practically tearproof. Comfort is assured by complete fabric lining and snug fit by knuckle band and elastic insert on canvas glove back. Made by **Edmont Mfg. Co.**, 503 Orange St., Coshocton, O.

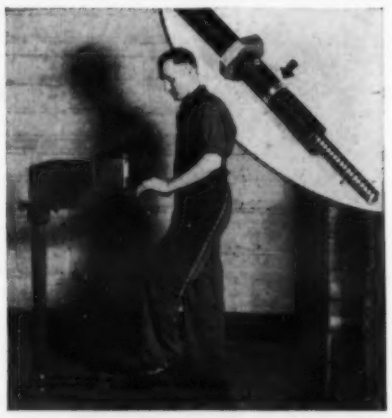
For more details circle NED-2787 on enclosed inquiry slip

HYDRAULIC RELIEF VALVE
for pressures from 100 to 5000 psi

Meeting requirements of Specification AN-V-lb for Army and Navy aeronautical use, this cartridge type hydraulic relief valve offers design possibilities for industry where precision hydraulic controls are required. It opens and closes within 7 per cent differential, and even smaller operating differentials can be supplied if required. Full load shocks and surges do not disturb valve's 'in balance' operation at any time. Valve operates quietly and is free from squeal and chatter. Design provides high volume flow at all pressures. Made by Hydraulics Div., **Pantex Mfg. Corp.**, Dept. 660-D, Pawtucket, R. I.

For more details circle NED-2788 on enclosed inquiry slip

CABLE BANDING MACHINE
fastens covering and identifies cable



Colored Lock-bands applied with Speedy banding machine lock and set outer coverings of cables to prevent slipping or shifting. At the same time, they allow identification of cable for shipping, stock or installation. Banding machines are built as hand, foot and power-operated models. Banded cable can be installed without first adjusting and locking covering and will not shift, slip or rattle. Made in many sizes, metals and colors, bands do not deform or change outside dimension of covered cable. Made by **Heller Co.**, 2153-N Superior Ave., Cleveland 14, O.

For more details circle NED-2789 on enclosed inquiry slip

NEW SIZE 6 and SIZE 7 SOLENOID STARTERS

- Silver Alloy Contacts
- Simple, Rugged Construction
- Steel Panel Mounting
- Front of Panel Wiring

Now—all the advantages of SOLENOID design in the NEW Allen-Bradley BULLETIN 709 SIZE 6 and SIZE 7 STARTERS. Allen-Bradley Bulletin 709 Size 6 and Size 7 solenoid starters possess all the features that have proved so successful in smaller Allen-Bradley starters. Write, today, for information. Allen-Bradley Co., 1334 South Second Street, Milwaukee 4, Wisconsin.

ALLEN-BRADLEY
QUALITY
MOTOR CONTROL

For more details circle NED-2790 on enclosed inquiry slip

CUT PAINTING COSTS WITH PRESSURE QUEEN

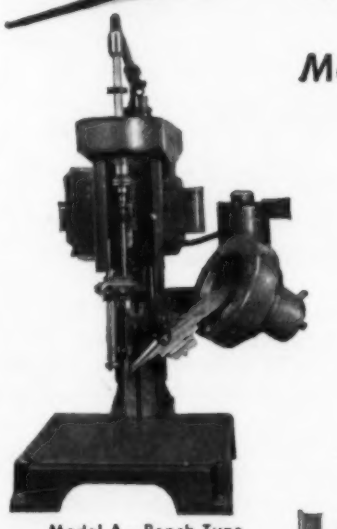
The saving in materials and labor on first painting job will pay for this complete 4-cylinder portable outfit. Your maintenance men can wheel it wherever work is to be done, from ground level, ladders or rigging. Handles any paint or spray solution. Absolutely no pulsation; no stops to build-up pressure. The outfit includes the compressor mounted as shown; all hose connections, 3-gallon material tank, spray gun and 1/2 h.p. motor or gas engine. Write for details.

THE CAMPBELL-HAUSFELD CO.
193 RAILROAD AVENUE HARRISON, OHIO

For more details circle NED-2791 on enclosed inquiry slip

YOU, TOO, CAN— SPEED PRODUCTION AND CUT ASSEMBLY COSTS . . .

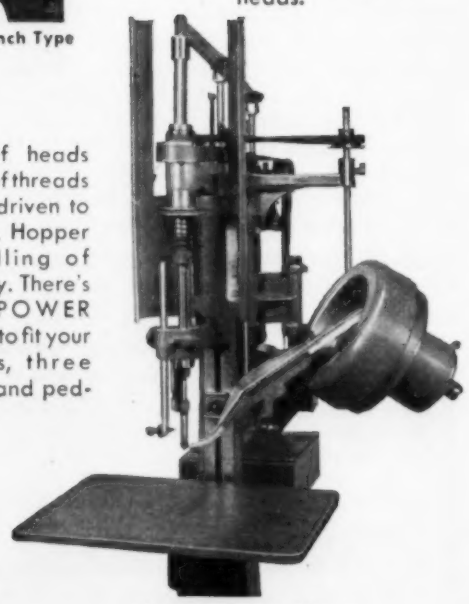
by this MODERN Machine Method



Model A—Bench Type

Thousands of manufacturers are profiting by the use of DETROIT POWER SCREWDRIVERS . . . They offer time and labor saving advantages too great to be overlooked. They will drive screws as fast as one a second! . . . Machine, wood, brass, self-tapping, sheet metal screws—standard heads, special heads.

No marring of heads ...no stripping of threads . . . all screws driven to uniform tension. Hopper fed, no handling of screws necessary. There's a DETROIT POWER SCREWDRIVER to fit your requirements, three models, bench and pedestal types.



Model B—Pedestal Type

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SEND SAMPLE ASSEMBLY FOR PRODUCTION ESTIMATE.

See Us, Booth 939, A.S.T.E. Show, Philadelphia, April 10-14.

DETROIT POWER SCREWDRIVER CO.
2819 WEST FORT ST. DETROIT 16, MICH.

For more details circle NED-2792 on enclosed inquiry slip

Whatever the Job . . . Uniforms Look Better, Wear Longer, Made of

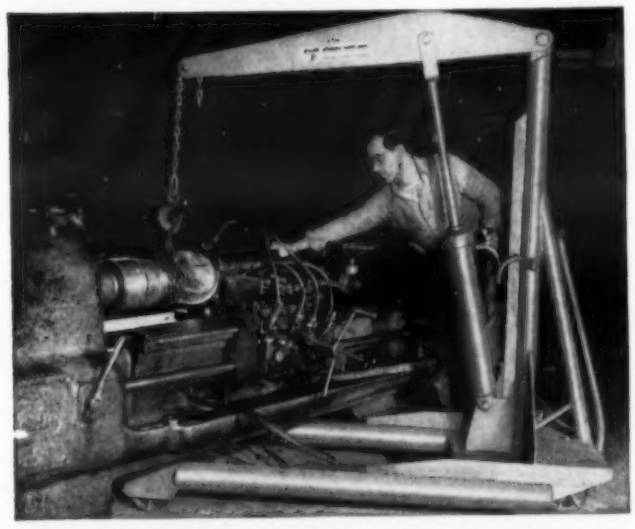
REEVES FABRICS

BOOST EMPLOYEE MORALE . . . save money, with uniforms of Reeves quality fabrics. Sanforized*, color-fast to sun, water and perspiration, Reeves fabrics wear longer and keep a crisp smartness even after repeated laundering. Write now for complete information for your industry.

*Residual shrinkage less than 1%

REEVES BROTHERS, Inc.
54 WORTH STREET, NEW YORK 13, N. Y.

For more details circle NED-2793 on enclosed inquiry slip



For handling forgings, castings, dies, general plant maintenance and millwright work. Lift to 13 ft.; capacities to 6,000 lbs.

Try this **RUGER Hydraulic Floor Crane** *for Ten Days Free*

Fill out the coupon below. Mail it to us attached to your letterhead. We'll contact our distributor in your territory and arrange with him to furnish you a genuine Ruger Hydraulic Floor Crane for a *ten day free trial* in your own plant.

There are no strings attached . . . no obligation to buy. If, at the end of the ten-day free trial, you believe that you can get along without the Ruger, it will be removed at no cost to you.

Remember, this is the genuine Ruger, the original Hydraulic Floor Crane that eliminates back-breaking heavy lifting and saves time and money in thousands of plants from coast to coast. Perhaps you may have wondered whether the Ruger could do as much for you. Here is your chance to find out without spending any money or obligating yourself in any way.

Mail coupon today as we must reserve the right to withdraw this free trial offer at any time and without prior notice.

Attach this coupon to your letterhead

Please arrange for us a ten-day free trial of a Ruger Hydraulic Floor Crane. We understand that this request does not obligate us in any way. Z-205

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RUGER *Equipment Co., Inc.*

Load Lifting and Handling Devices
619 West Fourth Street • Uhrichsville, Ohio

For more details circle NED-2794 on enclosed inquiry slip

MINIATURE AIR CYLINDERS
have 5/8-in. stroke and 75-lb thrust

Usable in small jigs and fixtures where size and space limitations are primary factors, Micro Model air cylinders deliver 75-lb thrust with 100-psi line pressure. Stroke is 5/8-in., with equal ram pressure at any stroke point. Machined from solid brass bar stock, cylinders will not rust or pit. Any number of cylinders can be operated by single control valve. Applications include injection or ejection of work, holding or clamping parts or other processing or assembly operations. Made by **Air-Mite**, 2651-B W. Lake St., Chicago 12, Ill.

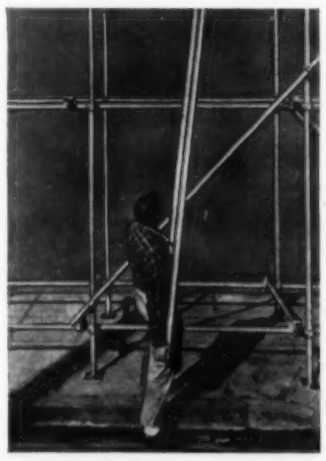
For more details circle NED-2795 on enclosed inquiry slip

POWER WHEELBARROW
steering wheel facilitates handling

Principal improvement in 1950 model Moto-Bug power wheelbarrow is large steering wheel to replace lever bar arrangement formerly used for guiding unit. Direction indicator is also included, and steering gear ratio has been increased from 2:1 to 4:1. Having rated hopper capacity of 10 cu ft or 1200 lb on platform body, wheelbarrow is powered by standard 4-hp gasoline engine and travels at speeds of 1½ to 4 mph, both forward and reverse. Made by **Kwik-Mix Co.**, Dept. NE, Port Washington, Wis.

For more details circle NED-2796 on enclosed inquiry slip

PORTABLE SCAFFOLD
is erected in many shapes and sizes

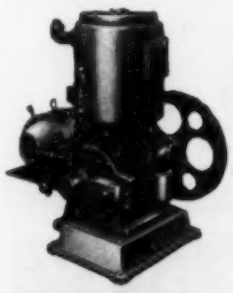


Designed for heavy construction work and for industrial maintenance, Tube-and-Coupler aluminum alloy scaffold will carry load of over 75 psf with safety factor of 4. Assembly consists of couplers, locking tubes and swivel base plates that require no wedging. Aluminum alloy couplers provide high gripping friction, low stress and ability to withstand impact. Resilience affords warning of excess loading before danger point is reached. Made by **Up-Right Scaffolds**, 1013 Pardee St., Berkeley 4, Calif.

For more details circle NED-2797 on enclosed inquiry slip

Get Greater Efficiency in High Vacuum Processes

Type SS — Single Stage Rotary Pump for vacuum to 5 mm. on tight system, for dry or semi-wet work. Capacities — 6 to 375 c.f.m.



Type RP — Single Stage Rotary Piston Pump for vacuum to 10 microns; for dry or wet operations. Capacities — 17 to 845 c.f.m.

BEACH-RUSS High Vacuum ROTARY PUMPS

- Faster Pump Down
- High Mechanical Efficiency
- Lowest Pressures
- Longer Service

For vacuum processing or packing, metal refining, sintering, coating, impregnating, clay deairing, electronics, nuclear research, instrument testing, air conditioning, laboratory and other vacuum operations—Beach-Russ Pumps assure faster, more efficient operation in every way. Their many superior, proven features of design and construction merit your earnest consideration. Write for Catalogs.

BEACH-RUSS CO.
60 Church St., New York 7, N. Y.

For more details circle NED-2798 on enclosed inquiry slip

Wire Forms Finished TO YOUR SPECIFICATIONS

● Now, Sommer is equipped to handle *your* wire forms—in a wide variety of attractive finishes.

We have installed fast, automatic nickel-plating equipment for either large or small assemblies. Also, if you want cadmium or zinc plating, bonderized enamel, parkerized or copper-coated finishes—you can count on Sommer.

Complete forming, stamping, cut-threading and butt-welding of light metal parts are also among our services. Whatever your problem, you can save time and money if Sommer handles the *complete* job. Just send sample, blueprint or drawing.

SOMMER METALCRAFT CORPORATION
(*Formerly JESCHKE Wire and Specialty Company*)
200 POSTON DRIVE
CRAWFORDSVILLE, INDIANA

For more details circle NED-2799 on enclosed inquiry slip

PIVOTED-BLADE SHEAR
A Revolutionary Design!

UPPER KNIFE TRAVELS IN CIRCULAR PATH

Radically different from all other metal-cutting shears. Overcomes handicaps of ordinary guillotine-type shears. No slides or guides to wear. Many other important features. All sizes for metal to 1-1/4" thick or 18'-0" long.

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Catalog No. 2011

THE CLEVELAND CRANE & ENGINEERING CO.
6607 East 282nd St., Wickliffe, O.

STEELWELD SHEARS

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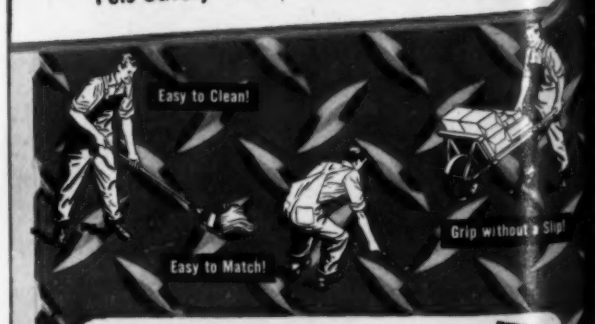
FOOT-SAFETY IN EVERY FOOT!
A.W. SUPER-DIAMOND FLOOR PLATE
Puts Safety Where Accidents Begin



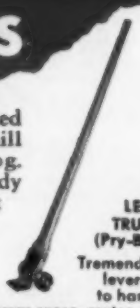
This 16-page Catalog tells all about A.W. Super-Diamond Floor Plates. Send for your free copy today.
Ask for Catalog L-35

A.W. SUPER-DIAMOND
FLOOR PLATES THAT GRIP
A PRODUCT OF
ALAN WOOD STEEL COMPANY
Conshohocken, Pa.

For more details circle NED-2801 on enclosed inquiry slip

Special TYPES ARE STANDARD at Fairbanks

HAND TRUCKS of special design required for many industries are run-of-the-mill stock items in the Fairbanks catalog. There's a type for every need . . . of sturdy design, high grade materials . . . and built to last. Here are some typical examples. If you don't see what YOU need — ask for it.



LEVER TRUCKS (Pry-Bars) Tremendous leverage to handle heavy cases, crates, machines, etc. Raises, loads 9 in. from the floor, 5, 6 and 7-foot lengths.

Fig. 500. JACK and PLATFORM TRUCK

Efficient, low cost lift jack and platform system increases production, cuts costs. Many standard platform sizes available, special sizes to order.

Fig. CC-10 TIER TRUCK

Beverages, cartons and crates can be handled more efficiently. High stacking cuts down storage space. Capacity 750 pounds.

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VALVES • DARTS & PIC UNIONS • TRUCKS • CASTERS

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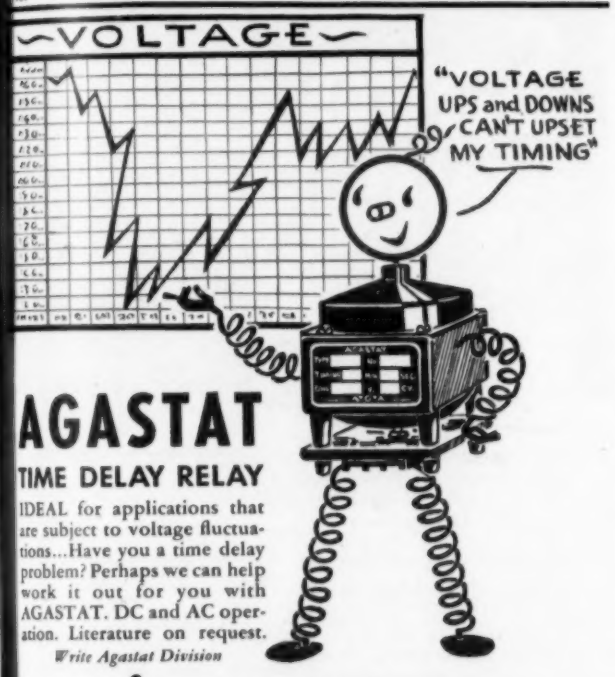

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TIME DELAY RELAY

IDEAL for applications that are subject to voltage fluctuations...Have you a time delay problem? Perhaps we can help work it out for you with AGASTAT. DC and AC operation. Literature on request.

Write Agastat Division

A-C-A AGASTAT TIME DELAY RELAY · A-C-A AIRPORT LIGHTING · A-C-A MARINE LIGHTING EQUIPMENT · A-C-A STIMSONITE REFLECTORS

AMERICAN GAS ACCUMULATOR COMPANY

1027 NEWARK AVENUE, ELIZABETH 3, NEW JERSEY

For more details circle NED-2803 on enclosed inquiry slip

DURO ELECTRIC DRILLS

. . 3 Sweet Ways to Drill Holes

They're streamlined to give least offset to the center line of the chuck; you put the drill to the work as naturally and surely as pointing your finger. They're versatile too; use them for wire brushing, polishing and other purposes, as well as drilling holes.

All have famous Jacobs keyed chucks, New Departure spindle bearings, helical double reduction gears of hardened alloy steel, and GE motors that won't stall, won't overheat at continuous peak load . . . and they're competitively priced! Ask your Distributor about Duro's 3 Sweet Ways to Drill Holes! . . . DURO METAL PRODUCTS CO., 2649 N. Kildare Ave., Chicago 39, Illinois.

Duro Utility for maintenance men, home workshop, etc.

Duro Heavy Duty Pistol Grip for "around the clock" production.

Duro Breast Drill, Heavy Duty. Large capacity. Packs a wallop!

Mechanically-minded men enjoy this big *FREE* Duro Tool Catalog. Just write.

"DOGGONE GOOD" DURO TOOLS FOR GRATIFYING PRODUCTION

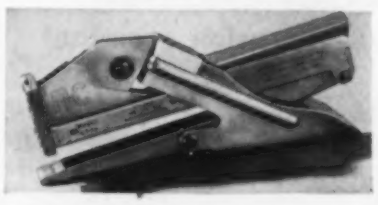
For more details circle NED-2804 on enclosed inquiry slip

FLUORESCENT LIGHTING FIXTURES use single-pin slimline lamps

Available in 4, 6 and 8-ft lengths, low cost lighting units employ slimline lamps which light instantly without starters. Each length can be obtained in two, three or four-lamp styles so that many in-line arrangements to fit all ceiling dimensions are possible. Units can be mounted flush or pendant, individually or in continuous rows, and are wired with approved 430-ma ballasts. Made by **Mitchell Mfg. Co.,** Dept. N-2, 2525 Clybourn Ave., Chicago 14, Ill.

For more details circle NED-2805 on enclosed inquiry slip

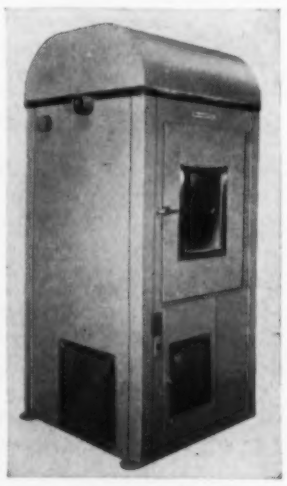
PLIER-TYPE STAPLER has long reach and wide jaw opening



Deep-throated Gator plier-type stapler is offered as model DT-32 with magazine load capacity of 334 light-gage staples and as model DT-30 which accommodates 140 heavy-gage staples. Both units have 4¼-in. reach and 9/16-in. jaw opening. Of aluminum and steel construction, tools weigh 14 oz. Deep throat and wide jaw design enable staplers to fasten up to 4¼-in. from edge of material and to handle thicknesses up to 7/16-in. with staples of ¼ to ½-in. leg length. Made by **Neva-Clog Products, Inc.,** 401 Logan St., Bridgeport, Conn.

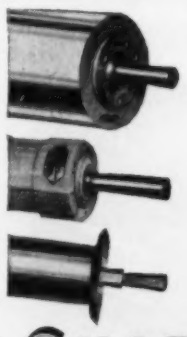
For more details circle NED-2806 on enclosed inquiry slip

METAL SURFACE DRYER usable for highly finished articles

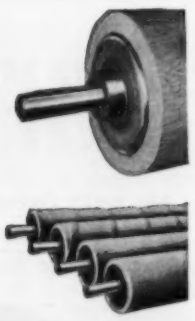


Articles with highly polished finishes can be taken directly from cold water rinse, placed in Technidrier metal surface dryer and rendered sparkling dry in less than 2 minutes. In this method, surface scratches and stains are eliminated. Unit is equipped with adjustable spindles mounted on turntable so that work can be removed or put in without disturbing other work in process of drying. There are ten 14-in. spindles with clearance of 14 in. and which are adjustable to handle work up to 28 in. on five spindles. Combination accommodates either ten 14 x 14-in. racks or five 14 x 28-in. racks. Dryer operates on 1 to 2-lb steam pressure and can also accommodate bulk work. Made by **Technic, Inc.,** 39 Snow St. N., Providence, R. I.

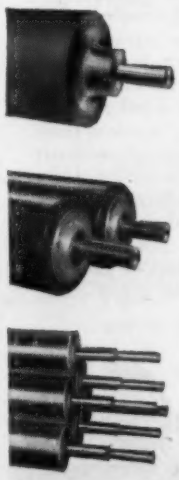
For more details circle NED-2807 on enclosed inquiry slip



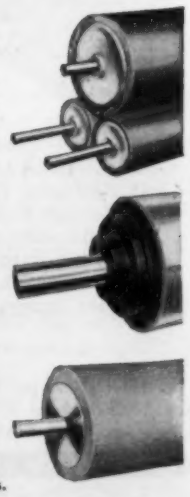
MANY INDUSTRIAL ROLL PROBLEMS are solved by using



SHAF-TITE* ROLLS



Many patented constructions provide strongest possible shaft setting. Your choice of many different types and materials—wood, rubber, iron, brass, stainless steel plastic, etc. Whatever your roll problem, put it up to Rodney Hunt.



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Industrial Roll Division

RODNEY HUNT MACHINE CO.

73 Maple Street, Orange, Mass.

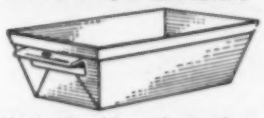
*Reg. U.S. Pat. Off.

For more details circle NED-2808 on enclosed inquiry slip

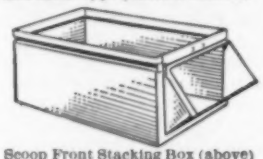
BERGER STEEL TOTE BOXES SIMPLIFY SMALL PARTS HANDLING

Reg. U.S. Pat. Off.

Berger Stacking Box (above) is reinforced at all corners and top edge. Offset rib permits easy stacking when full. Drop or fixed handles.



Nesting Box (above) is one piece construction with tapered sides and reinforced top edge and ends. Has fixed-type punched handles.



Scoop Front Stacking Box (above) . . . handy, visible container for small parts. Offset reinforced rib simplifies stacking. One drop handle and cross rib permit easy handling. Has label holder.

● Yes, popular Berger Steel Stacking, Nesting and Scoop Front Boxes again are available for small-parts handling. Use them in production areas, shops and warehouses to speed up handling, protect parts against damage, save space, time, labor and money. Berger Tote Boxes are strong and sturdy, electrically spot-welded and reinforced to withstand rough usage. Made in 16- and 18-gauge steel, enameled or plain. Choice of sizes. Write today for full information and prices.

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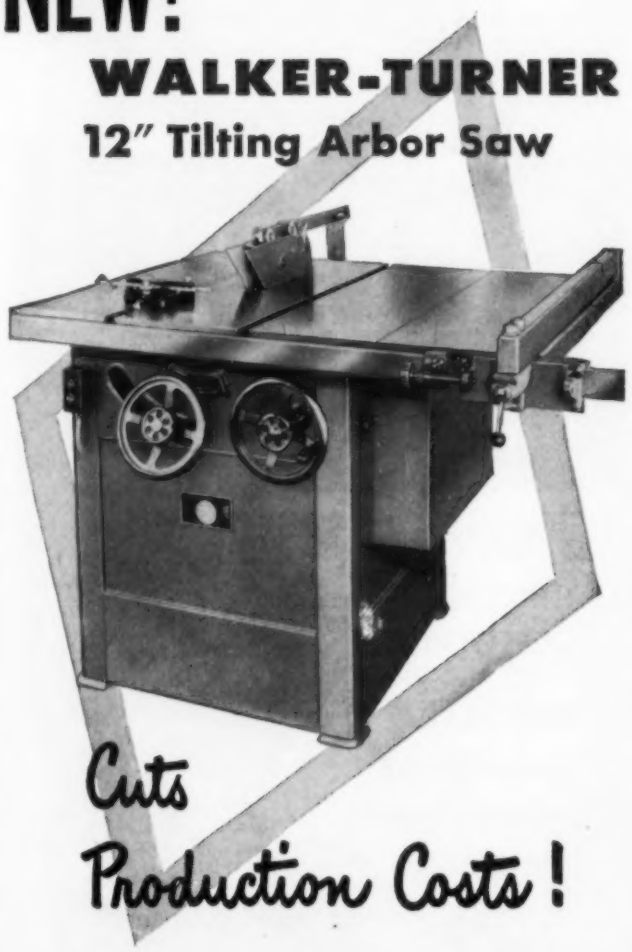
BERGER MANUFACTURING DIVISION

REPUBLIC STEEL CORPORATION • • • • CANTON 5, OHIO

For more details circle NED-2809 on enclosed inquiry slip

NEW!

WALKER-TURNER 12" Tilting Arbor Saw



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CAPACITY: 4½". Dado capacity 1½" wide.
SAW ARBOR: 1" diameter.
TABLE: 48" wide x 38½" deep.
SPINDLE SPEED: 3600 r.p.m.
DRIVE: Exclusive "Synchro Belt Drive"
SAW GUARD: New improved safety guard and splitter.
RIP FENCE: New rip fence locks front and rear micrometer adjustment "T" slots for miter gauge.
5 h.p. 3 phase motor or 3 h.p. single phase.

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Kearney & Trecker Corp.
Dept. N2, Plainfield, N. J.

Please send me a copy of the complete Walker-Turner Catalog.

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City.....Zone.....State.....

For more details circle NED-2810 on enclosed inquiry slip

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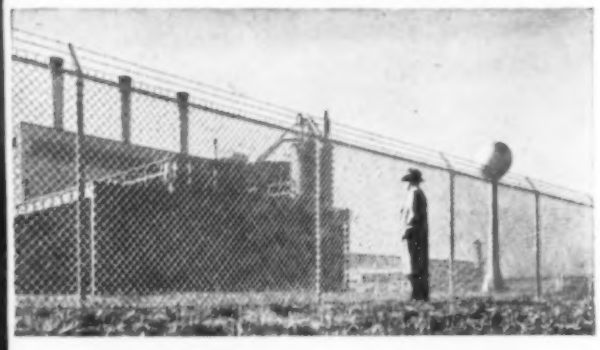

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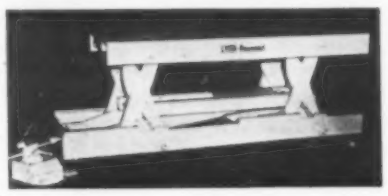
PRODUCT OF PAGE STEEL & WIRE DIVISION OF AMERICAN CHAIN & CABLE COMPANY, INC.

▲ For more details circle NED-2813 on enclosed inquiry slip ▲

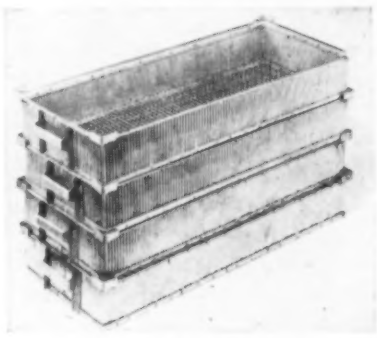
HYDRAULIC ELEVATING TABLE employs compound lever principle



Exceptionally low height and wide range of elevation is made possible with compound lever arrangement in model No. 1196 hydraulic sheet feeding table. Unit has capacity of 10,000 lb and 12 to 36-in. range of elevation. Platform is 36 in. wide by 96 in. long, and end and side extensions are available to increase platform area. There are no uprights extending above platform to interfere with overhanging material. While two-speed foot pump can be supplied, power operated pump with either pushbutton or foot switch control is recommended for faster elevation. If desired, table can be furnished with wheels and casters. Made by **LYON-Raymond Corp.**, 4168 Madison St., Greene, N. Y.

▲ For more details circle NED-2815 on enclosed inquiry slip ▲

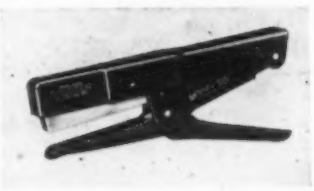
LIGHTWEIGHT ALLOY BASKETS are heat and corrosion resistant



Corrugated side walls of these lightweight alloy baskets give vertical strength to thin sections, permit stacking and provide flexibility when subjected to temperature changes. Baskets can be fabricated from any metal that can be spot welded such as mild steel, aluminized steel, Monel, stainless, Everdur and Inconel. Bottom of wire mesh or expanded metal provides drain when units are used to carry work through subsequent operations. Baskets can be made any size to meet specifications and reinforced for heavy loads. Made by **Alloy Engineering Co.**, P. O. Box 189, Berea, O.

▲ For more details circle NED-2816 on enclosed inquiry slip ▲

PLIER TYPE STAPLER capable of heavy fastening work

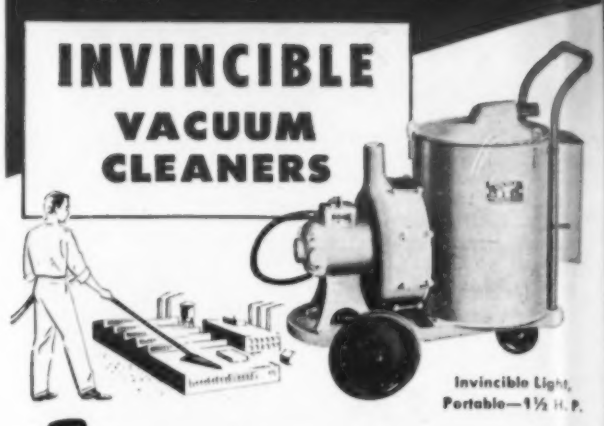


Resembling pair of ordinary pliers in both size and shape, model P6 stapler is held in hand to operate and can be carried readily in pocket. Deep throat permits application of staples up to 2⅝ in. from edge of work.

Cam and roller action permits powerful penetration with little effort. Stapler can be used to fasten thick piles of manuscripts, records or other papers. In shipping department, it can be used to staple heavy corrugated wrappings, multiwalled bags, etc. It is available in two models; P6-6 which takes 0.026 x 0.019-in. wire staple with ¼ and ⅜-in. leg, and P6-8, which takes staples of 0.050 x 0.019-in. wire with same leg size. Made by **Bostitch**, 551 Mechanic St., Westerly, R. I.

▲ For more details circle NED-2817 on enclosed inquiry slip ▲

Keep your plant cleaner with INVINCIBLE VACUUM CLEANERS



Invincible Light, Portable—1½ H. P.

These Invincible features insure outstanding performance: 1. Multi-stage turbines produce plenty of power. 2. Positive Separation precedes vacuum producer. 3. Reach *every* surface with attachment tools. 4. Also recover scores of industrial materials. 5. Compact, portable; no interference with production. 6. 15 models from ½ to 5 H.P. 7. Larger models can be operated continuously. 8. No dirt or abrasives ever touch moving parts . . . *Over 100,000 Invincibles in use—5,000 for over 25 years. Send for free bulletin.*

INVINCIBLE VACUUM CLEANER MFG. CO.
DOVER, OHIO

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ADD THESE 6 SELLING POINTS TO YOUR PRODUCT

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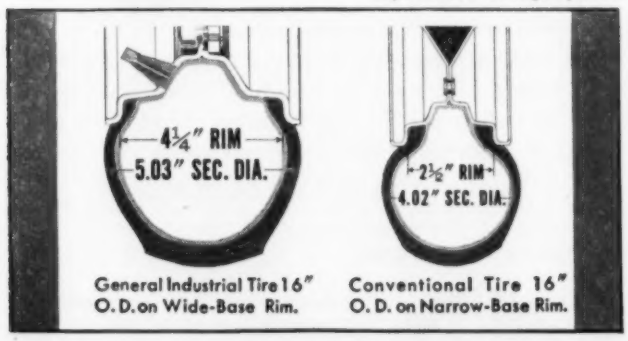
Available in assemblies of Tires, Tubes and Wheels. Size O. D. 8" to 23"—200 to 2000 lbs. cap. for low or high speeds.



General Industrial Tire 16" O. D. on Wide-Base Rim. Conventional Tire 16" O. D. on Narrow-Base Rim.

MORE
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New Worker Comfort in This Elastic Knit-Lined Neoprene Glove

This Stanzoil Duplex NL-34 is designed expressly for, and is sold only to, industry. Elastic-knit lining stretches with every hand movement, gives new worker comfort and protection, more freedom than old-style flannel linings. Slip on and off easy as a cloth glove. Non-slip finish holds oily objects in a sure grip. Chocolate-brown DuPont Neoprene resists damage from oils, acids, caustics. Stanzoil NL-34's give you comfort and protection at lower cost per hour. Sizes small, medium and large. Larger Duplex Gloves, Catalog No. NL-42 and NL-52. Ask your supplier or write for informative catalog today.

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OVER 30 Years OF QUALITY GLOVE MAKING

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ALLIS-CHALMERS TYPE DZ INDOOR OIL CIRCUIT BREAKERS

"DZ" BREAKERS are *economical* because they're integrally complete, with supporting framework, solenoid operator, control relay and auxiliaries — ready for installation. Four mounting arrangements: Cell mounted; Frame mounted; Flat surface mounted; and in vertical lift metal clad switchgear.

Type	Rated KV	Interrupting Capacity
DZ-40B	7.2	100,000 kva
DZ-60B	13.8	150,000 kva
DZ-100B	13.8	250,000 kva
DZ-200B	13.8	500,000 kva

Expanding or revising your present system . . . or installing a new one, be sure to get Bulletins 6129 and 6179, containing specifications and dimensions of DZ breakers. A-2930

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ALLIS-CHALMERS

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MD **MILWAUKEE DUSTLESS BRUSH CO.**
MILWAUKEE 3, WISCONSIN

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A typical Hackney Shell—a WATER TANK for use on concrete mixers and pavers. Sizes up to 110 gal. capacity.

Numerous metals have been employed in the manufacture of Hackney Deep Drawn Shapes and Shells, including: steel, stainless Steel, Monel metal, nickel, aluminum, magnesium, Hercoloy, Everdur, bronze, copper and various alloys.

But no matter what metal is used in making a Hackney Deep Drawn Shell or Shape, users gain many exclusive advantages: decreased overall weight, greater strength, faster production, elimination of expensive machining operations, greater durability, improved appearance, lower costs.

Pressed Steel Tank Company engineers will be glad to work with you in adapting special shapes—to improve existing products—to develop new products. Write for full details.

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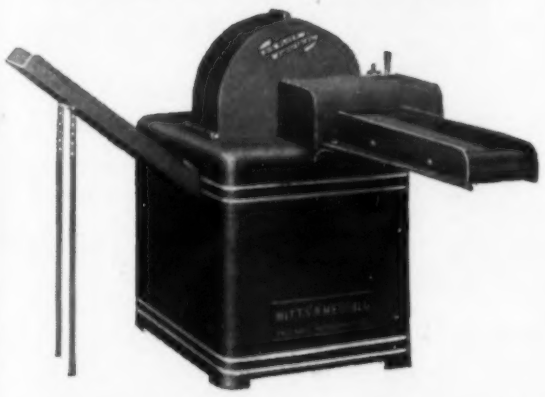
CONTAINERS FOR GASES LIQUIDS AND SOLIDS

For more details circle NED-2822 on enclosed inquiry slip

THE M&M AIR-FLUFF PAPER SHREDDER



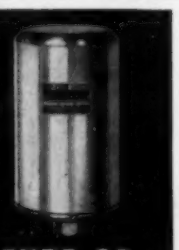
Used for the commercial manufacture of paper excelsior, or the private destruction of blueprints, letters, or other confidential records. This can be quickly, efficiently, and safely accomplished for you on one of these machines. Built in 3 sizes ranging in capacity from 200 to 2500 pounds per hour. Each machine may be adjusted to cut widths of 1/8", 3/16", 1/4" or 3/8". Write for further information.

MITTS & MERRILL
1000 SOUTH WATER STREET • SAGINAW, MICHIGAN

For more details circle NED-2823 on enclosed inquiry slip

NEW...

Extremely sensitive
PRESSURE & VACUUM *Switches*



TYPE SB

The new Type SB pressure and vacuum switches are for use in applications in which close on-off differentials and absolutely consistent maintenance of cut-in and cut-out settings are essential in the control of pressure or vacuum. Available are two pressure models and two vacuum models. The Pressure Switches have adjustable ranges from 0-15 psi and adjustable on-off differential from .1" wc-10" wc. They may be furnished as calibrated, micrometer type or uncalibrated for screw driver adjustment.

Electrical ratings at 125/250 V AC between 1200 watts and pilot duty depending on differential. The Vacuum Switches offer adjustable ranges from 30"-0" hg vac with adjustable on-off differential from .1" wc-10" wc. Furnished as calibrated micrometer type or uncalibrated with screw driver adjustment. Electrical ratings of both models 1200 watts at 125/250 V AC.

UNITED ELECTRIC CONTROLS COMPANY
81 School Street
Watertown, Mass.

Special models available for requirements not included in the specifications above.

Write for new bulletin 4926 P giving complete details today.

STANDARD & SPECIAL THERMOSTATS & PRESSURE SWITCHES

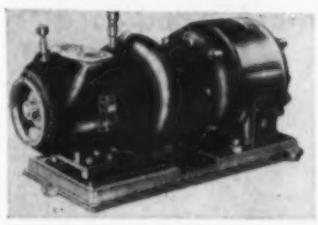
For more details circle NED-2824 on enclosed inquiry slip

ROTARY CARD FILE
usable as single or double desk

Designed especially for use where space conservation is important, desk type Rotor-File has cover which fits over opening when unit is not being used as file. V-type opening makes any of 50,000 cards fully visible for reference. Operator can work at file from seated position. This combination unit requires no more space than that used by two standard size desks. Made by **Wassell Organization, Inc.**, Dept. NE, P. O. Box 390, Westport, Conn.

For more details circle NED-2825 on enclosed inquiry slip

AIR PRESSURE-VACUUM PUMP
self-compensating blades are used



Displacement blades of this class 23 air pump furnish their own lubrication and take up their own wear. Dry lubrication eliminates oil vapors and makes pump suitable for handling paper, food products and pharmaceutical preparations. Pump is designed for operation at 1750 rpm so that it can be direct-connected to standard electric motors. Capacities range from 5 to 20 cfm for single units with larger capacities available by group drive. When group drive is specified, pumps are furnished with double extended shaft. Rotation is normally clockwise, but counterclockwise rotation is obtainable. Made by **Kraissl Co.**, 289 Williams Ave., Hackensack, N. J.

For more details circle NED-2826 on enclosed inquiry slip

FLOOR EDGER
two motors assure efficient action

Since one motor operates sanding disk and another the dust pick-up fan, model E-7 edger has efficient vacuum action regardless of load. Unit is convenient for finishing not only strip of flooring along baseboards but also other places difficult to reach with customary drum or disk type sanders. It incorporates adjustable casters to cope with uneven floors, sanding disks which can be removed by hand, dustproof bag with zipper opening, and light to illuminate dark areas. Made by **Lincoln-Schlueter Floor Machinery Co.**, 1242 W. Van Buren St., Chicago 7, Ill.

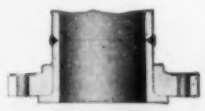
For more details circle NED-2827 on enclosed inquiry slip

CRANE Welding Fittings for every piping system

Butt-Welding Return Bend

STEEL BUTT-WELDING FITTINGS
for use with standard or extra strong pipe. Combine uniform strength, maximum serviceability and ease of installation. In all patterns and sizes up to 24-in. O.D.

FORGED STEEL WELDING FLANGES
in classes for all working pressures and temperatures. Available in screwed, welding-neck and slip-on types. Also, all-purpose Cranelap swivel flange with welding nipple for easier-to-make-up joints. Full range of sizes. Various facings to provide for every requirement.



Cross-section, Cranelap swivel flange

Socket-welding elbow

FORGED STEEL SOCKET-WELDING FITTINGS
in standard and extra strong weights. Especially designed for lines up to 2-in. Extra deep socket makes self-aligning joint. Weld metal, deposited on outer surface of pipe, eliminates danger of "icicles" forming inside. Forged of high grade carbon steel.

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Swartwout-Dexter Heat Valve Roof Ventilator

- Sturdy
- Weatherproof
- Damper closes tight when desired
- Ample throat capacity per size

THE Original RIDGE VENT

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Industrial Ventilation Specialists Since 1904
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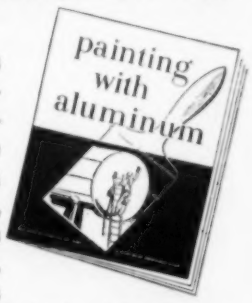
For more details circle NED-2829 on enclosed inquiry slip

HOW TO GET MORE PROTECTION FOR METAL SURFACES...INSIDE OR OUT*



THIS NEW FREE BOOK tells how! Contains important information on proper application, paint selection and the high resistance of aluminum paints to moisture, fumes, heat and wear. Alcoa does not make aluminum paint, but we have prepared this book to help you buy and apply it right.

If you've been buying paint without the information this book contains; if you've never used the superlative aluminum paints it describes—your paint knowledge is out of date. This book tells how to get the best aluminum paint and apply it for greatest service. Includes coverage tables, facts on correct types of ready-mixed aluminum paints for metal, masonry, or wood surfaces, inside or out—and for heated surfaces. Answers many important painting questions.

This important buying and application information will be sent by return mail.

MAIL THIS COUPON TODAY!

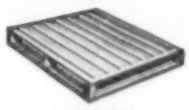
ALUMINUM COMPANY OF AMERICA
Paint Service Bureau, 1735D Gulf Bldg.,
Pittsburgh 19, Pennsylvania
Please send me free copy of: *painting with aluminum*
Name (Please print)_____
Address_____
City_____ State_____

Look for this shield on aluminum paints made by many paint manufacturers using ALCOA PIGMENTS.
*The RIGHT aluminum paint for this job is ALUMINUM METAL & MASONRY PAINT.
ALCOA

For more details circle NED-2830 on enclosed inquiry slip

POWELL BUILDS MATERIALS HANDLING EQUIPMENT TO FIT Every JOB

CASTER EQUIPMENT



PALLETS

COLLAPSIBLE BOXES

Whatever your operation, *Powell* materials handling specialists can design and build equipment that will speed your production and lower your costs.

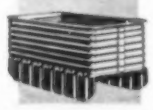
So, before you buy, check with *Powell—originators of cold formed all-steel handling equipment.*

EVERYTHING IN MATERIALS HANDLING CONTAINERS

CRANE BOX PLATFORMS

ROLL-OVER DUMP BOXES

POWELL PRESSED STEEL



Dept. 54, Hubbard, Ohio

For more details circle NED-2831 on enclosed inquiry slip

BETTER STAMPINGS WIDER USEFULNESS

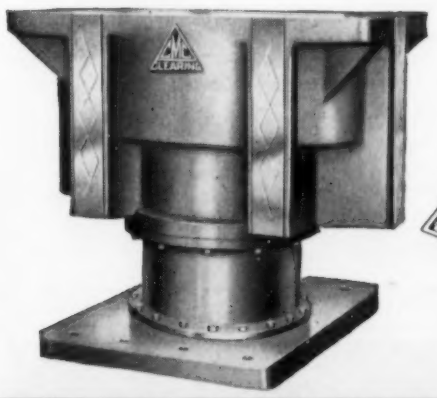
from any metal working press when you equip with

CLEARING DIE CUSHIONS

You can do more—both in variety and volume of work—with any metalworking press if you equip it with suitable die cushions as designed and built by Clearing—pioneers in their development. Cushions are useful in many ways—for blankholding on single action presses, for overload safety, for lift-outs, and other applications.

Clearing guided cushions, pneumatic or hydro-pneumatic, are available in a great variety of types and sizes to fit almost any press, from small O.B.I.'s up to the largest presses built.

Write for your copy of Bulletin 212. It contains a wealth of valuable information about Clearing cushions and what you can do with them. There's no obligation.

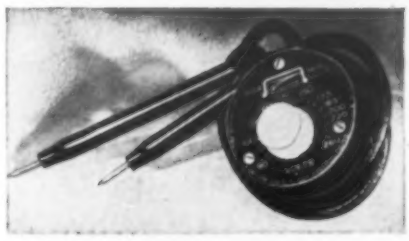


CMC CLEARING

CLEARING MACHINE CORPORATION
6499 WEST 65TH STREET • CHICAGO 38, ILLINOIS

For more details circle NED-2832 on enclosed inquiry slip

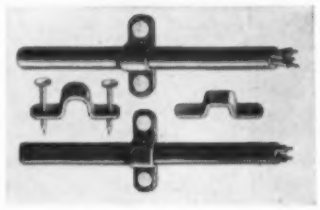
MINIATURE VOLTMETER features line voltage scale



Improved model 410A Mini-Volt voltmeter utilizes expanded scale centered on common 110 and 220 line voltages. Instrument is accurate to within 2 v on 110-v ac. Practically burnoutproof operation is assured by glow-lamp indicator that has life of 25,000 hours. Flexible test leads are 12 in. long and tipped with heavily insulated test prods to assure safety. Instrument is recommended for checking voltages, differentiating between ac and dc, checking continuity, locating grounds and testing blown fuses. Made by **Industrial Devices, Inc.,** 22 State Rd., Edgewater, N. J.

For more details circle NED-2833 on enclosed inquiry slip

PLASTIC STRAPS for all open wire, cable and cord



Long-life wiring installation is effected by these non-corrosive plastic straps for Neoprene and Romex cable; telephone, radio, control and ground wires; cords; and entrance cables. Thick pliable rounded edges protect against short circuits especially under conditions of vibration, strain, wind and weather. Used with No. 12 x 1-in. copper slating nails, straps will withstand all corrosive conditions. Type PBD has flat opening for all standard double wire cables, and type PBT is supplied with round larger opening for all triple wire cables. Made by **Commercial Plastics Co.,** Merchandise Mart, Chicago 54, Ill.

For more details circle NED-2834 on enclosed inquiry slip

OIL-HYDRAULIC PRESS has eight-station index table

Available in 2½ and 5-ton models with 2 or 5-in. stroke, oil-hydraulic press is equipped with air operated automatic-cycling dial index table. Time of cycle can be adjusted from 1 to 60 seconds. Parts can be ejected automatically either mechanically or with exhaust air. Since ram has full power on return stroke, stripping is effected easily. In addition to standard 8-position tables, models with 4, 6, 12 or 24 stations can be furnished. Made by **Hy-Air Products Co.,** 1703 Probert Rd., Jackson, Mich.

For more details circle NED-2835 on enclosed inquiry slip

HANSEN TACKER for 1001 uses

CHAIR seat covers—with a saving of 6c per seat—with neater, faster work—are being tacked with the Hansen Model T-2 Tacker.

It does a more efficient job for Lee L. Woodard Sons Co., Owosso, Mich. It provides neater seat covers, held securely in place.

What are your tacking problems? Submit specimen or sketch, with details.

Request Booklet

HANSEN TRADE MARK REG. U.S. PAT. OFF.

A.L. HANSEN MFG. CO.
5164 RAVENSWOOD AVE., CHICAGO 40, ILL.

For more details circle NED-2836 on enclosed inquiry slip

REMARKABLY EASY TO HANDLE!

The ALCO-LITE Type LDL ALUMINUM LADDERS

The ALCO-LITE Type LDL ladder was designed specifically for use where extreme light weight combined with considerable strength is required. The fly ladder is supplied with locks, pulleys and ropes as standard equipment. Easy to move about, easy to erect, easy to store. Fine for general purpose use.

Write for Industrial Catalog describing nine types of ALCO-LITE *Aluminum Ladders.*

Pioneer Builders of Aluminum Industrial Ladders

ALCO-LITE ALUMINUM LADDERS

ALUMINUM LADDER COMPANY

346 CARBIS STREET • WORTHINGTON, PENNA.

For more details circle NED-2837 on enclosed inquiry slip

A RECORDING MECHANICAL COUNTER

Actuated by an Electrical Impulse

it operates on the output of a scaler, photo tube, or other electrical unit . . permanently records counts on a 2¼" tape . . . automatically resets to zero.

In Radioactive Research it saves precious time by eliminating many hours of manual labor, resulting in greater economy and efficiency.

In industry it maintains a permanent record automatically, recording production and time each hour.

Write for complete information and illustrated circular S C 15

STREETER-AMET COMPANY
AUTOMATIC WEIGHT RECORDERS & SCALES
HIGH SPEED COUNTERS SINCE 1888
4101 Ravenswood Ave., Chicago 13, Illinois

For more details circle NED-2838 on enclosed inquiry slip

Hundreds of uses ...and built as YOU want them!

BRIDGEPORT Bellows Assemblies

● Wherever temperature or pressure control design problems must be met, Bridgeport bellows assemblies or bellows devices are the simple, economical answer. Bridgeport designs and builds them for *your* products—exactly, completely, speedily. Wide range of metals and sizes. Send for Catalog GZ-100; it contains ideas from cover to cover!

Bellows Assemblies . . . Bellows . . . Bellows Devices

BRIDGEPORT THERMOSTAT Division
ROBERTSHAW-FULTON CONTROLS CO., BRIDGEPORT 1, CONN.

For more details circle NED-2839 on enclosed inquiry slip

DAV-SON BULLETIN BOARDS

• SAVE TIME
• PREVENT ACCIDENTS
• IMPROVE MORALE

Flashing red and green illuminated safety boards with changeable letters are constant reminders to avoid plant hazards

Highly visible Lobby Directories, sales and production record boards with changeable letters are available in your choice of frames and sizes. Black, blue, or green felt backgrounds.

Cork Back Pin-Up Boards with wood or metal frames in a wide selection of styles and sizes are ideal for typed announcements, posters and other messages. Models for indoor and outdoor use.

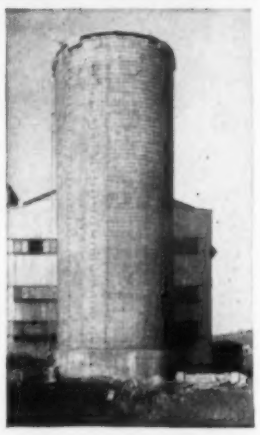
DAV-SON

Write for Bulletin "B"

A. G. DAVENPORT & SON, INC.
ESTABLISHED 1932
311 N. DESPLAINES ST., CHICAGO 6, ILL.

▲ For more details circle NED-2840 on enclosed inquiry slip ▲

SAFE VERTICAL STORAGE



Neff & Fry Storage Bins keep their contents safe from fire, storm, exposure, collapse, and theft. This is due to structural advantages which have proved their superiority in actual performance for 36 years.

The unique feature of N. & F. Storage Bins is the Super-Concrete Stave. With beaded and grooved edges and diagonal points, each stave interlocks with six adjoining ones. Horizontal joints are saw-toothed. Galvanized steel hoops around the joint areas impinge directly upon all the stave points.

The staves are formed under great pressure. They are dense in texture and have such high compression strength that superstructures are frequently built on top of N. & F. Bins without extra supports.

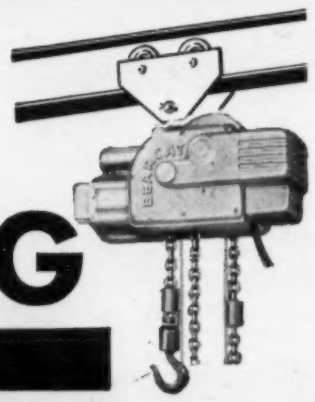
Shown in the photo is a 24-ft. dia x 60-ft. high N. & F. Bin erected for Speer Carbon Co., Punxsutawney, Pa. It is used for storing calcined coke. Capacity is 475 tons.

Before you reach any conclusions on vertical storage structures, be sure to get all the facts about N. & F. Bins. Complete information will be gladly sent upon request.

THE NEFF & FRY CO.
East Central Ave., Camden, Ohio

NEFF & FRY STORAGE BINS

▲ For more details circle NED-2841 on enclosed inquiry slip ▲



ONG

ON $AVING$

The Bearcat Electric Hoist is "economy-minded" . . . besides being a worker's "load-lightener." Its easy maneuverability and light weight lessen workers' strain and fatigue—which helps increase efficiency. The operator is further protected by two brakes . . . an automatic holding brake, and a controller operated snubbing brake.

An exclusive feature of the Bearcat Hoist is the interchangeability of its spur gears, which permits a range of lifting speeds from 12 to 50 feet per minute. Main housing and covers are of lightweight, high-tensile aluminum alloy . . . is easily carried from job to job. Lifting capacity is up to 2000 lbs.

Complete specifications contained in Bulletin P-53.

THE HARRINGTON COMPANY
17TH AND CALLOWHILL STREETS • PHILADELPHIA 30, PA.
MAKERS OF HOISTS SINCE 1876

▲ For more details circle NED-2842 on enclosed inquiry slip ▲

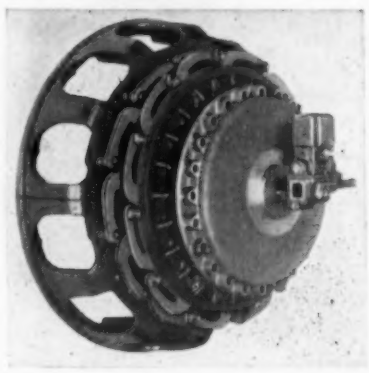
SELF-ALIGNING PILLOW BLOCK
has adequate permanent lubrication

Cavity filled with sponge iron acting as wick plus exceptionally high porosity of bearing metal itself insures adequate lubrication for entire life of Lubralife pillow block. Both sponge iron section and pores in metal are impregnated with lubricant under pressure so that lubricant forms thin protective coating around shaft without dripping.

Perfect alignment is assured by floating ball and socket construction of unit. These bearings are available in both pillow block and flange mountings in ¼, ⅝, ¾ and 1-in. bore sizes. Other sizes can be supplied on special order. Expected life of units is 20,000 to 30,000 hours under normal operating conditions. Made by Congress Drives Div., **Tann Corp.**, 3752 E. Outer Dr., Detroit 34, Mich.

▲ For more details circle NED-2843 on enclosed inquiry slip ▲

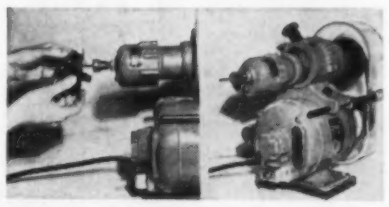
FRICTION CLUTCH-BRAKE
air-operated type dissipates heat



Punch press, power shear and other start-stop operations can be controlled by this friction clutch-brake. It is operated by air at shop line pressure through electric solenoid valve controlled with pushbutton. Drive disk with flexible fingers is bolted to flywheel and is detachable in segments to reline worn facings. Axial pressure for actuating clutch is supplied by compressed air acting on floating piston in aluminum cylinder. Brake pressure is afforded by preloaded springs which serve also to release clutch and return piston. Low operating temperature permits large work load on machine, and total wear on friction facing is minimized. Complete range of sizes is offered from 8¼ to 35-in. OD and carrying torque capacities between 3660 and 578,000 lb-in. Made by **Industrial Clutch Corp.**, 521 Frederick St., Waukesha, Wis.

▲ For more details circle NED-2844 on enclosed inquiry slip ▲

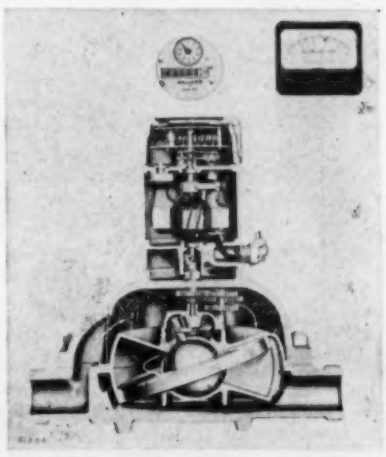
HOLE TAPPING ATTACHMENT
for bench tapping and drilling



Universally adaptable Torqomatic torque driven tapping attachment (*See NED Feb. '47*) is now available as bench type model. Complete unit consists of built-in attachment with plastic-guard-enclosed pulley drive powered by desired motor. It is available as model 101 ranging from 0 to 3/16-in. capacity; No. 202, from 3/16 to 5/16-in.; and No. 303, from 5/16 to 5/8-in. Made by **Charles L. Jarvis Co.**, P. O. Box 290, Middletown, Conn.

▲ For more details circle NED-2845 on enclosed inquiry slip ▲

INDICATING FLOW METER
capable of handling corrosive fluid



Rate of flow of corrosive liquids can be indicated continuously by redesigned Veriflow meter (*See NED Feb. '46*). Among fluids which can now be handled are acetic acid, aluminum-potassium, sulphate, ammonia, calcium compounds, carbolic acid, formaldehyde, fruit and vegetable juices, hydrogen peroxide, phosphoric acid, potassium hydroxide and concentrated sulphuric acid.

Consisting of Veriflow meter plus automatic control equipment, Veritrol device can be used to control flow of liquid at predetermined rate, as well as indicate and integrate it. Made by **Hays Corp.**, 980 Eighth Ave., Michigan City, Ind.

▲ For more details circle NED-2846 on enclosed inquiry slip ▲

NO WASTED MOTION HERE

with **Cambridge WIRE BELTS**

A Cambridge Rod-Reinforced Belt permits continuous, uniform heat treating of metal parts. Open mesh assures free circulation of heat and air—design gives greatest strength, straight travel and successful operation up to 2100° F.

Cambridge Wire Belts are efficient workers in your field. They serve in heat, cold, corrosive and wet processes; through packaging and assembly operations—moving quickly or slowly at constant or varying speeds. Whenever a material can be processed during movement, a Cambridge belt can, and does, save time, money and floor space. . . . Cambridge offers you a modern engineering staff with experience in your field and skilled workmen to produce the right belt in the correct mesh and weave, metal or alloy to perform your operation better . . . for longer.

Consult your Cambridge representative — look under "Belting, Mechanical" in your Classified Telephone Directory or write direct.

FREE BOOK—Famous throughout industry as the most valuable reference work on belts and conveyor systems. Write for free copy . . .

Cambridge Wire Cloth Co.

Wire cloth in rolls. | Also specialized wire fabrications

DEPARTMENT C
CAMBRIDGE 4, MD.

OFFICES IN PRINCIPAL INDUSTRIAL CITIES

▲ For more details circle NED-2847 on enclosed inquiry slip ▲

FOR PROOF BEYOND COMPARE
Send for
RUBYFLUID
Soldering Flux
Special Offer

For $1 Ruby will send you one pint of liquid and one half pound of paste soldering flux.

Try it! See for yourself the amazingly stronger, smoother and longer lasting unions you get when you use Rubyfluid.

Rubyfluid
Wets out freely . . .
Has no harmful fumes . . .
Acts quickly and saves time . . .

In addition Ruby will send you Free a new booklet on "How to Solder."

SEND YOUR $1 TODAY TO—

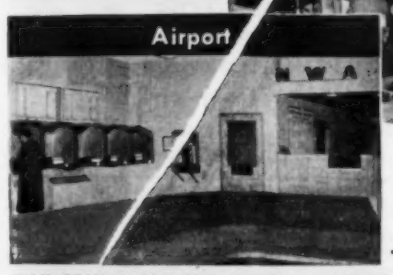
Ruby Chemical Co.
72 McDowell St.
Columbus, Ohio

Rubyfluid

▲ For more details circle NED-2848 on enclosed inquiry slip ▲

In Any Location—
A Quiet Spot for Telephoning

The modern, doorless Burgess-Manning Acousti-Booth provides a quiet spot for telephoning . . . in noisy locations anywhere. Thick walls of sound-absorbent material soak up noise. Conversations are clearer . . . "private."



ALSO
- Banks
- Bus Terminals
- Railroad Stations
- Utility Plants

MAIL COUPON FOR FREE BULLETIN

BURGESS-MANNING COMPANY
743-C East Park Ave., Libertyville, Illinois

Please send booklet describing Burgess-Manning Acousti-Booths.

Name_____ Firm Name_____

Street_____ City_____

▲ For more details circle NED-2849 on enclosed inquiry slip ▲

Cut Cost—Add Strength

Your quantity-run special fastener type parts made EXTRA FAST by the Kaufman Process

Hold your costs down on out-standard headed and threaded parts. Many users are surprised at the economy and production speed possible, and the *superior strength* of most items when made by the Kaufman Process. Send blue prints and specifications for estimate.

CLEVELAND Top Quality FASTENERS

Send blue prints and specifications of your specially designed parts to

THE CLEVELAND CAP SCREW COMPANY
2917 EAST 79TH STREET • CLEVELAND 4, OHIO

▲ For more details circle **NED-2850** on enclosed inquiry slip ▲

You CAN USE MOTO-TRUCS IN MORE PLACES, DUE TO THEIR *Shorter Length*

• HUNDREDS OF COMPANIES are Palletizing and Stacking Materials at a Big Saving by

MOTO-TRUC

Telescopic Hi-Lift Truck up to 15" shorter due to more compact power unit.

• **MOTO-TRUCS** not only have an advantage over other makes of Motorized Battery Operated Walkie Trucks because of their shorter overall length which permits you to reduce aisle space, but are also the simplest and easiest to operate as all controls are in easy grip Roller type handle.

AND THEIR POWER COST IS LOW. You can operate a Moto-Truc for as little as 8c per 8-hr. day.

PATENTED ARTICULATING HINGED SPRING UNIT, on Hi-Lift types, holds drive wheel down on floor for better traction.

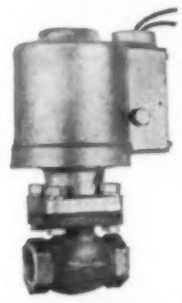
WRITE FOR LITERATURE

The MOTO-TRUC Co.
1953 E. 59th Street
CLEVELAND 3, OHIO.
ORIGINATORS OF MOTORIZED HAND TRUCKS

▲ For more details circle **NED-2851** on enclosed inquiry slip ▲

SOLENOID VALVE
for hard-to-handle liquids and gases

Precision seating of this solenoid valve insures tight shutoff and trouble-free operation. Solenoids are hand wound, moistureproof and oversized to assure high ratio of power to friction. Laminated core keeps operating current to minimum. Heavy valve body is noncorrosive metal and is bolted to bonnet. One-piece valve stem and disk is stainless steel, and plunger tube is hermetically sealed. Valve body is joined to bonnet with flange and gasket to provide tight seal yet can be taken apart easily without distorting valve body and seat. Power supply can be alternating or direct current. Valve remains in open position until current is cut off. Made by **Charles Engelhard, Inc.** Dept. B, 850 Passaic Ave., East Newark, N. J.



▲ For more details circle **NED-2852** on enclosed inquiry slip ▲

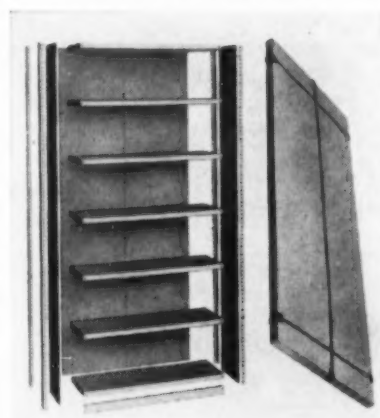
PORTABLE ELECTRIC HEATER
automatic with built-in thermostat

Few seconds after model PA heavy duty portable electric heater is plugged into 240-v circuit and dial set at desired temperature, large amount of fan-circulated hot air is distributed evenly into room. Carrying handle at top makes it easy to move heater wherever needed. Silver gray cabinet with chrome trim is constructed of heavy furniture steel; has smooth edges, rounded corners and rubber feet; and is 23½ in. high x 17 in. wide x 6½ in. deep. Unit incorporates Safety-grid lifetime heating element and automatic safety shutoff switch which prevents overheating. There are no exposed hot wires or coils. Unit is available in 3000 and 4000-w capacities. Made by **Electromode Corp.**, 54 Crouch St., Rochester 3, N. Y.

▲ For more details circle **NED-2853** on enclosed inquiry slip ▲

STEEL SHELVING UNITS
can be assembled easily

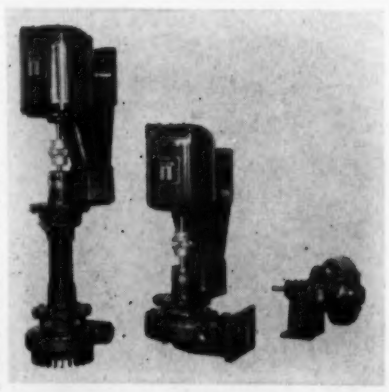
Both 12 and 18-in. depth adjustable steel shelving units are now supplied knocked-down in compact cartons containing all necessary nuts, bolts and other parts for erection. Weighing less than 200 lbs, carton can be taken to point of use where unit can be erected easily with wrench and screwdriver. Shelves are adjustable on 1-in. centers and can be moved any time. Two or more units can be bolted together into rack or moved without dismantling. Units are 36 in. wide by 7 ft 3 in. high when erected and are finished in olive green baked enamel. Made by **General Fireproofing Co.**, Dept. NE, Dennick Ave., Youngstown 1, O.



▲ For more details circle **NED-2854** on enclosed inquiry slip ▲

CENTRIFUGAL COOLANT PUMPS
are usable with any standard motor

Conforming to JIC standards, line of centrifugal coolant pumps permits use of any NEMA motor. Illustration shows method of mounting motor by use of flexible coupling and motor-mounting bracket. At left is submersible type designed for installation inside coolant tank. This model normally rests directly on bottom of tank or reservoir. However, tank brackets and flanges are available to facilitate mounting on edge, side or top. Assembly in center is built to mount on side of coolant tank or machine pedestal for close-coupled installation. No auxiliary inlet piping is required. Pump at right is constructed for various types of connections to driving unit and can be operated in horizontal or vertical position. Made by **Pioneer Pump & Mfg. Co.**, 19646 John R St., Detroit 3, Mich.



▲ For more details circle **NED-2855** on enclosed inquiry slip ▲

Courtesy Ideal Models Co., Detroit, Mich.

for Model Kitchens!

Six versatile De-Sta-Co Toggle Clamps save in this simple, economical, plastics cementing fixture. The turntable more than doubles production . . . eliminates the cementing cycle "bottleneck."

These perfect reproductions are for a manufacturer of metal kitchens. This operation, cementing on tops, requires: Fast cementing cycle—positive clamping pressure for a perfect bond—precise alignment for accurate assembly.

De-Sta-Co No. 225-U fills these requirements. *Completely retractable* when opened for quick insertion and removal of work, it offers the rapid toggle action, positive holding pressure and accurate performance that make De-Sta-Co Toggle Clamps *ideal* "Model Tooling".

For your working-holding problems in Assembly, Welding, Bonding, Machining, Inspection . . . of any materials . . . tool up with these economical, efficient, high-production examples of "Model Tooling".

De-Sta-Co Toggle Clamp Catalog describes more than forty stationary and portable clamps. Write for your free copy today.

DETROIT STAMPING CO.

360 Midland Ave. • • Detroit 3, Mich.
"See us at the A.S.T.E. Show. Booth 321."

▲ For more details circle **NED-2856** on enclosed inquiry slip ▲

Better Painting with Fuller BRUSH CO. 100% PURE BRISTLE Paint Brushes

Fuller paint brushes are still 100% PURE BRISTLE . . . still *full* weight. Specifications unchanged. Pure bristle gives more yardage and does a better job than any other brush material. The "flag ends" and the reservoirs formed by the overlapping bristles permit the paint to flow smoothly onto the surface with a minimum of brush marks.

Also, Fuller 100% Nylon Paint Brushes for longer wear on rough surfaces.

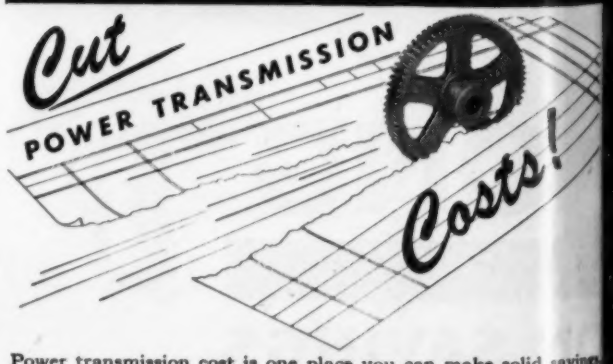
Send for booklet on how to reduce brush costs. Simply write to . . .

SHIPPED FROM NINE DISTRIBUTION POINTS

INDUSTRIAL DIVISION
The FULLER BRUSH Co.
3530 MAIN STREET • HARTFORD 2, CONN.
IN CANADA: FULLER BRUSH COMPANY, LTD., HAMILTON, ONT.

▲ For more details circle **NED-2857** on enclosed inquiry slip ▲

OHIO STOCK GEARS AND SPEED REDUCERS



Power transmission cost is one place you can make solid savings. Use Ohio Stock Gears and Speed Reducers for the machines you build or maintain and you win these three cost-cutting advantages:

1. They *are* stock, saving the extra cost of "specials."
2. No waiting. Deliveries are "right off the shelf."
3. Replacements are quicker, cost less and eliminate expensive down time.

Ohio Stock Gears are available in spur, helical, bevel, worm and worm gear types, in pitch diameters from 24 to 6 and in mitre types from 24 to 4. Ohio Stock Reducers include ratios from 10-1 to 3200-1; single reduction capacities from 1/6 HP to 10 HP; double reduction capacities from 25 inch pounds to 6000 inch pounds torque.

Put these Ohio Stock Gear and Speed Reducer advantages to work on the machines you design and operate. Our nearest distributor will be glad to help you.

THE OHIO GEAR COMPANY
1320 East 179th St., Cleveland 10, Ohio
ESTABLISHED 1915

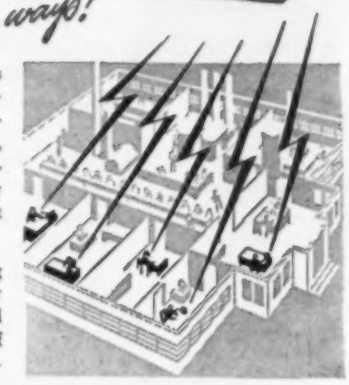
OHIO GEARS

▲ For more details circle **NED-2858** on enclosed inquiry slip ▲

NEW INTERCOM

can cut your Operating Costs—

In a dozen ways!



IN THE OFFICE—Executone saves you time and money . . . by stepping up efficiency through interdepartmental communications, by quick exchange of information among all personnel, by eliminating "inside" calls that tie up your switchboard.

IN THE PLANT—by coordinating Production Control, by faster Material Handling, by improved Job Time Keeping—by uses of intercom that probably never occurred to you!

Your Executone Man has all the facts at his fingertips . . . gives you Executone's experience in hundreds of businesses. *Get the entire story*—no obligation.

Write Dept. D-7 **Executone**

COMMUNICATION & SOUND SYSTEMS

415 Lexington Ave., New York 17, N. Y.

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Here's a real **PARTS BOX** buy!

THE NEW **Bruco** BOX

1. Corrugated Steel for Maximum Strength and Rigidity.
2. Three Piece Construction — Securely Arc Welded.
3. 14 Gauge Corrugated Steel Body.
4. 9 Gauge Corrugated Steel Reinforced Skid.
5. 7½" Standard Underclearance 26" Wide; 36" Long; 26" Deep.
6. Capacity 14 Cu. Ft. — 3000 Lbs.
7. Tiering Plates And/Or Crane Lugs at Slight Additional Cost.

$26.50 EACH

Ask for No. 524. Delivery within 30 days. Prices for special boxes upon application.

Bruco HANDLING EQUIPMENT

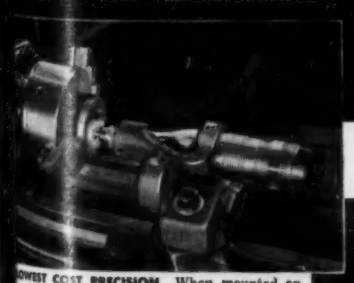
BRUMMELER STEEL PRODUCTS CORPORATION

1411 Ionia Ave. S. W., Grand Rapids, Michigan

▲ For more details circle **NED-2860** on enclosed inquiry slip ▲

ACCURACY TO .0001" IN PRODUCTION SET-UPS

FOR AS LITTLE AS **$117.50**



Internal grinding on lathe with PRECISE wheel arbor mounting 1½ D. wheel.

LOWEST COST PRECISION. When mounted on standard machine tools, PRECISE SUPER 40 at speeds from 20,000 to 45,000 R.P.M. turns out precision jobs heretofore possible only on stationary machines costing up to 100 times as much.

VERSATILITY. For cylindrical, internal, external and form grinding; for milling with H.S. steel or tungsten carbide midget mills; for microfinishing and polishing. Use on wood, glass, rubber, plastics, or any metal including the hardest alloy steel.

DURABILITY. All metal housing, rigid PRECISE quill, lubricant-sealed micro-precision bearings. ¼ H.P. AC-DC motor (115 volts) is protected by replaceable fusetrons.

ATTACHABLE COOLFLEX SHAFT. (optional) quickly attached for bench work and handtool applications. Same speeds, same precision quill as in PRECISE SUPER 40.

Milling hardened die with tungsten carbide mill in COOLFLEX ATTACHMENT.

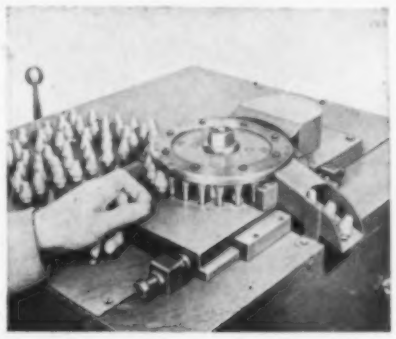
Write FOR CIRCULAR

PRECISE PRODUCTS CO., 1346 Clark St., Racine, Wis.

PRECISE SUPER 40

▲ For more details circle **NED-2861** on enclosed inquiry slip ▲

SEMIAUTOMATIC MARKING MACHINE can be used for cone shaped parts

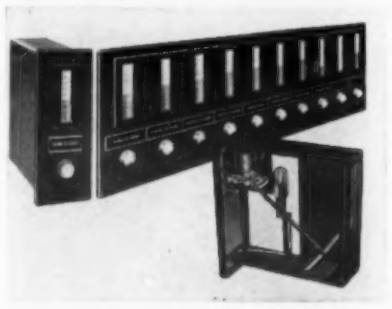


While developed for marking small fuses, Acromark model No. 53 machine can be adapted to marking wide variety of parts by simple change of ring feed. Rather than by forcing parts against concave stationary die, marking is accomplished by short dwell in contact with rotating die as it rotates part in ring dial.

After starting switch is thrown, lever at left controls speed through speed variation unit. Parts are placed on ring dial between freely rotating cradle rolls. Loading is accomplished during dwell for marking; and at any speed, operation is smooth and positive. After marking, part is carried by guide out on chute. Machine is powered by ½-hp 60-cycle single-phase motor with variable speed unit. Made by **Acromark Co.**, 7-11 Morrell St., Elizabeth 4, N. J.

▲ For more details circle **NED-2862** on enclosed inquiry slip ▲

ILLUMINATED DIAL INDICATORS depict changes in liquid levels from any remote location

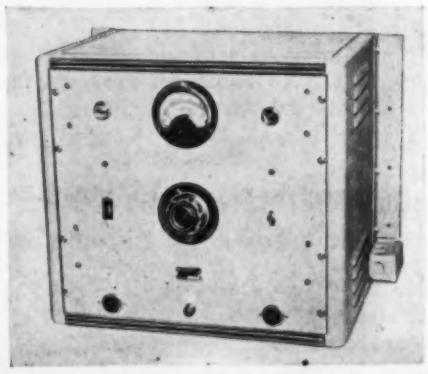


Operating from any 3 to 15-lb pneumatic transmitter or directly from valve loading pressure, Panellit level indicators produce sensitive and accurate reading of liquid levels from any distance. Changes in levels from any source are visually reproduced on graduated illuminated dial scale on face of instrument. Solid red band on translucent dial depicts every dip and rise in level of liquids.

Level gages are available in single units, or any number can be grouped in multiples for flush panel mounting. 'Drawer' type assembly makes it convenient to remove entire mechanism for inspection. Zero settings and adjustments are positioned externally at back of gage for easy access. Any of these level gages can be provided with positive high and low level mercury alarm switches which are wired in series with hermetically sealed Panalarms. These signal units light red lamp and sound warning horn whenever levels reach beyond or below predetermined high or low settings. Made by **Panalarm Products, Inc.**, 7214 N. Clark St., Chicago 26, Ill.

▲ For more details circle **NED-2863** on enclosed inquiry slip ▲

ADJUSTABLE POWER SUPPLIES electronically regulated units deliver stabilized direct current



Utilizing direct-coupled amplifier to control pair of Thyratron rectifier tubes, this adjustable power supply is offered in two 250-w output power types. Standard series is stabilized against line changes of 90 to 130 v within plus or minus 0.5-per cent and load-regulated within plus or minus 0.5-per cent from no load to full load. Super series, with more sensitive error control circuit, is line-stabilized and load-regulated to within plus or minus 0.1-per cent. Ten models of each series have maximum outputs of from 25 to 500 v at 10 amp to 500 ma., respectively.

Full load stabilization is accomplished in less than one second under conditions of minimum to maximum full load changes. Line voltage stabilization takes place within 1/20-second. Ripple is less than 1 per cent at full rated output. Overload cutout and reset circuit breaker with overload indicator are utilized. All standard models are designed for operation from 90 to 130-v single-phase 60-cycle power source. Special models can be obtained to operate from any other line voltage or frequency. Construction throughout is in accordance with Underwriters' Laboratories requirements. Made by **Amplifier Corp. of America**, Industrial Div., 398-15 Broadway, New York 13, N. Y.

▲ For more details circle **NED-2864** on enclosed inquiry slip ▲

CAN YOU AFFORD NOT TO GIVE YOUR WORKERS PROPER *Seating?*

A tired worker costs MUCH more than a GOOD CHAIR

Royal's **515 STOOLS WILL HELP KEEP YOUR WORKERS AT PEAK EFFICIENCY...**

Resulting in More Work Produced per Man Hour and Lower Actual Costs per Chair.

- STURDY MASONITE INSERT IMBEDDED IN SEAT PAN.
- LEG EXTENSION FOR EASY HEIGHT ADJUSTMENT.
- ADJUSTABLE BACKREST.
- OVEN BAKED GREY ENAMEL FINISH.

60 DAY *Free* TRIAL examine it... test it... use it without obligation

10 YEAR *Free* MAINTENANCE POLICY

ROYAL METAL MFG. CO.
175 NORTH MICHIGAN AVENUE
CHICAGO 1, ILLINOIS

▲ For more details circle **NED-2865** on enclosed inquiry slip ▲

Ford reports . . .

A $75,000 per year saving with Kodagraph Autopositive Paper

Before . . . Ford's valuable original drawings had a short life. They were used as the blueprint "masters" . . . were exposed to machine wear and tear . . . constant handling. Soon they lost their detail . . . produced illegible prints . . . which meant that new drawings had to be ordered.

Now . . . it's a different story. Ford reproduces its drawings on Kodagraph Autopositive Paper . . . gets positive, photographic intermediates—quickly, inexpensively. They use these to turn out all blueprint orders. *Just a simple change in routine*—but one that gives Ford an estimated $75,000 per year saving in redrafting time alone . . . and frees draftsmen for creative work. Also, it simplifies blueprint production . . . for "Autopositives" permit the use of uniform, practical machine speeds . . . do not smudge or smear . . . produce highly legible prints even after hundreds of run-throughs.

Learn the whole story on revolutionary, low-cost Kodagraph Autopositive Paper, which allows you, or your local blueprinter, to turn out positive, photographic intermediates *directly* . . . with existing print-making equipment and standard photographic processing.

Write today for free booklet giving all the facts on Kodagraph Autopositive Paper.

EASTMAN KODAK COMPANY
Industrial Photographic Division, Rochester 4, N.Y.

Kodagraph Autopositive Paper

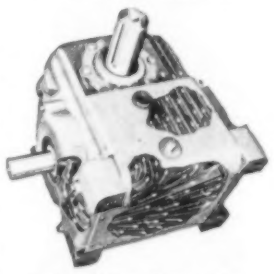
The Big New Plus in Engineering Drawing Reproduction

Kodak

▲ For more details circle **NED-2866** on enclosed inquiry slip ▲

A Billion RPM per year at 30hp?

That's duck soup to either of these 5" reducers—just like 100 hp at 1750 or 63 hp at 580 is to similar 8" models. That's what they're for: **continuous heavy loads.**

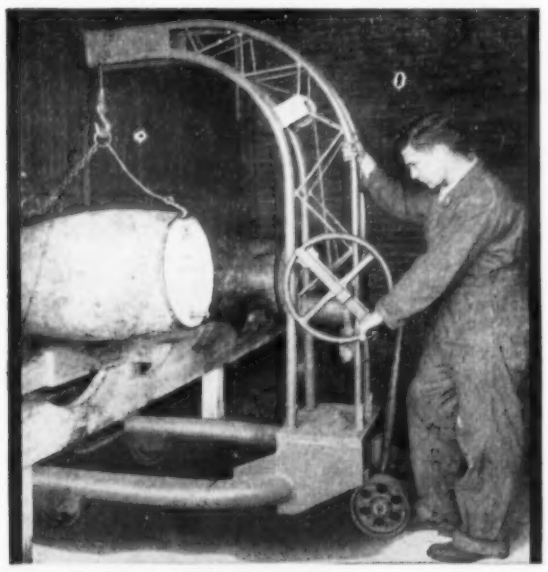


There's nothing special about them. Both are standard stock models. One (right) is fan cooled; the other (above) water cooled. But BOTH have Cone-Drive double enveloping gearing. That's what gives them their stamina, their ability to carry big loads continuously, their outstanding shock resistance, their compactness and their **amazing low cost per horsepower.**

Ask for data sheet #8974, pick your size and ratio and get a quote. You have a real surprise coming.

CONE-DRIVE GEARS Division Michigan Tool Company
DOUBLE ENVELOPING GEAR SETS & SPEED REDUCERS
7171 E. McNichols Road • Detroit 12, Michigan

For more details circle NED-2867 on enclosed inquiry slip



"CANTON" CRANES *Simplify* MATERIAL HANDLING

• Lifting heavy loads in awkward places is no problem when "Canton" Portable Cranes are used. Made of light tubular welded steel in 8 sizes, capacity: 1 to 3 tons.

FOR FULL DATA, WRITE TODAY FOR BULLETIN 445

The HILL ACME Company "CANTON" DIVISION 6404 Breakwater Ave CLEVELAND 2, OHIO

For more details circle NED-2868 on enclosed inquiry slip

Tempilstiks°

the amazing Crayons that tell temperatures

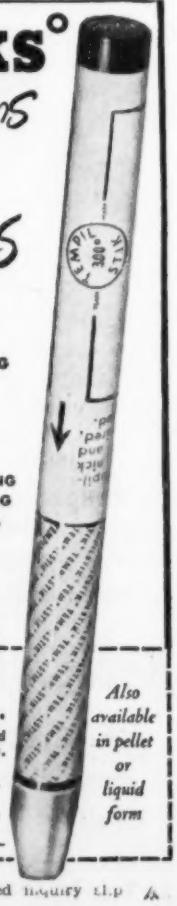
in
WELDING
FLAME-CUTTING
TEMPERING
FORGING
CASTING
MOLDING
DRAWING
STRAIGHTENING
HEAT-TREATING
IN GENERAL

It's this simple: SELECT the Tempilstik° for the working temperature you want. MARK your workpiece with it. WHEN the Tempilstik° mark melts, the specified temperature has been reached.

available in these temperatures (°F)
113°, 125°, 138°, 150°, 163°, and so on to 400°F
400°, 450°, 500°, 550°, 600°, and so on to 2000°F

gives up to 2000 readings

$2 each



Also available in pellet or liquid form

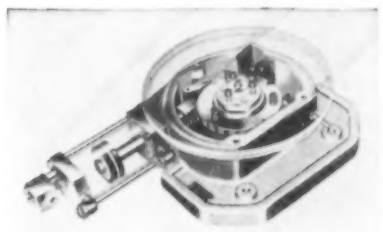
TEMPIL CORPORATION
132 W. 22nd St., New York 11, N. Y.

FREE—Tempil° "Basic Guide to Ferrous Metallurgy" —16¼" by 21" plastic-laminated wall chart in color. Send for sample pellets, stating temperature of interest to you.

NAME
COMPANY
ADDRESS

For more details circle NED-2869 on enclosed inquiry slip

DIAL FEED TABLE
in standard and self-indexing types



Index accuracy of improved models 11EA and 11EB dial feed tables is within plus or minus 0.002-in. of nominal, measured at periphery of 11-in. nest plate. Instant index response and conservation of high pressure air are assured as piston always returns to rear of cylinder. When table is mounted on flat plate, entire working mechanism is completely enclosed. Rack which is resiliently attached to stainless steel piston rod drives gear which carries pawl to actuate index plate. Standard table can be set to 4, 8, 12 or 24 index stops. Baffle plate is employed to prevent pawl from engaging improper teeth when less than 24 index points are required. Rod extending through Oilite bushing moves outward to actuate valve or switch for secondary operations. Made by **A. K. Allen Co.**, 495-A Wythe Ave., Brooklyn 11, N. Y.

For more details circle NED-2870 on enclosed inquiry slip

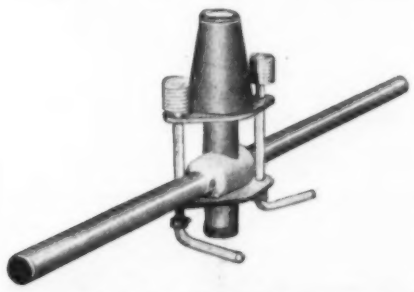
STORAGE LOCKER CABINET
especially handy for small offices

Adaptable for offices where there is not enough room for full size storage cabinets or where storage of office supplies is kept at minimum, this steel locker is 24 in. wide x 12 in. deep x 48 in. high, in addition to 6-in. leg height. To prevent harming other office furniture, doors can be opened only 90 degrees. Unit is equipped with recessed handle with padlock hasp or flat key lock and is finished in green or nonglare gray baked-on enamel. Price is about $18.25. Made by **Lyon Metal Products, Inc.**, 324 Clark St., Aurora, Ill.

For more details circle NED-2871 on enclosed inquiry slip

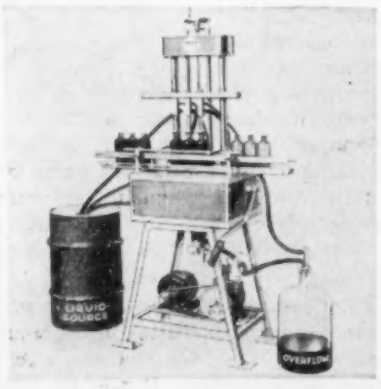
SAFETY STOPPER
for emergency use on tank cars

Wild flow of petroleum and other liquid products from railroad tank cars can be stopped quickly with this Whopper Stopper. Contents can be unloaded through device, thus eliminating need for pumping out tanks from overhead. In addition to preventing loss of material, stopper minimizes possibility of fire, explosion, property damage or personal injury. Made by **Industrial Products Co.**, 2807 N. Fourth St., Philadelphia 33, Pa.



For more details circle NED-2872 on enclosed inquiry slip

LIQUID FILLING MACHINE
for ounce to quart-size containers



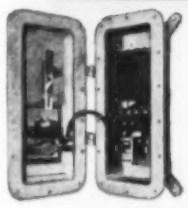
This model A vacuum liquid filler is designed for uses involving frequent changes of container size and liquids to be filled. Available with three or four spouts, straightline machine will operate at speeds up to forty containers per minute. It fills from liquid source resting on floor, and overflow is handled by bottle attached to outlet hoses. All metal parts contacting liquid are of either stainless steel or nickel plated brass. Flexible tubing of neoprene and special plastics can be furnished to permit application in handling of many corrosive and noncorrosive types of liquids. Machine is provided with adjustable rails to accommodate width of containers and with separate screw adjustment for height. Made by **Packer Machinery Corp.**, 28-32 Irving Place, New York 3, N. Y.

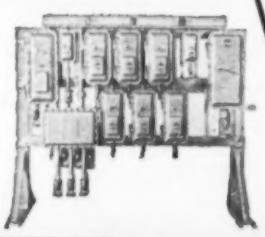
For more details circle NED-2873 on enclosed inquiry slip

R&S

CBS STARTERS CIRCUIT BREAKERS

Complete Line
EXPLOSION-PROOF
DUST-TIGHT
Class 1, Group D





Meet ALL Standards PLUS

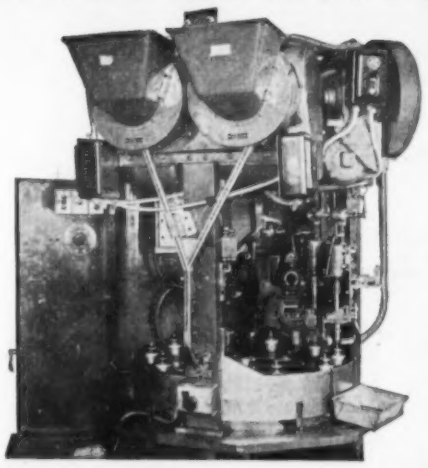
NON-FREEZING revolving shaft for operating Push Button Station and Manual Reset.
SLIDE OPERATING MECHANISM . . . no strain on circuit breaker handle.
PRECISION HINGED REMOVABLE COVER permitting complete accessibility.
STAINLESS STEEL cover bolts with corrosion resistant baked enamel finish enclosure.
ABUNDANT WIRING SPACE with conduit outlets factory plugged to exclude dust, dirt, and moisture.
INDIVIDUAL UNITS and factory assembled panels of two or more units . . . NEMA sizes 0 to 4. Also waterproof types.
DEPENDABLE OPERATION insured by 48 years of design and manufacturing experience.
Write for Catalog H47-15

A13

RUSSELL & STOLL COMPANY, INC.
Precision-Built Electrical Equipment
125 BARCLAY STREET, NEW YORK 7, N. Y.

For more details circle NED-2874 on enclosed inquiry slip

These KRAUS HOPPERS



Save $45.00 per day!

Four Kraus Hoppers applied to a Sciaky Welder to feed two sizes of two different pieces, actually save $45.00 per day for one manufacturer of electrical equipment. A metal housing is inserted manually and assembly and ejection are completely automatic.

This saving is typical where Kraus Hoppers are used. Every Kraus Hopper is specifically designed to handle the particular job to which it is applied. For complete information on adapting this dollar saving equipment to your process, send sample parts, with orientation and delivery requirements to

KRAUS DESIGN INC.
950 EXCHANGE ST. • ROCHESTER 8, N. Y.

For more details circle NED-2875 on enclosed inquiry slip

CUT SWEEPING TIME UP TO 75%

MODEL 800 (Sulky Optional)

RIDE OR WALK
with this new HEAVY-DUTY
WILSHIRE POWER SWEEPER

Picks up everything from cigarette butts to pop bottles in one easy sweeping operation! With or without sulky, Model 800 reduces cleaning time as much as 75% and saves its cost over and over again. All-steel construction, built to handle toughest cleaning jobs indoors or out. All safety devices for indoor operation—sweeps right up to walls or equipment without marring—vacuums as it sweeps. FACTORY-TESTED —90-DAY GUARANTEE.

FEATURES: 36" sweeper width with 5 h.p. or 48" sweeper width with 8 h.p. 4-cycle air-cooled gas engine • Special Wilshire dust control • Finger-tip dual control • Full floating ball bearing shaft • Exclusive Wilshire brush assembly.

USED BY LEADING FIRMS FROM COAST TO COAST:
Anheuser-Busch, Inc.
Continental Baking Co.
Ford Motor Co.
Gimbel's
Railway Express
Reynolds Tobacco Co.
Sears, Roebuck & Co.
U. S. Steel Co.
Western Electric Co.

Dealers throughout the U. S. and Canada

Free demonstration on YOUR job. *Write for full information.*

Wilshire POWER SWEEPER CO. 4615 ALGER STREET LOS ANGELES 39, CALIF.

Sweeping the Country since 1940

For more details circle NED-2876 on enclosed inquiry slip

For heating ordinary compounds, you will find the proper compound melter or dispenser in the standard Sta-Warm line. Sizes from 1 pint to 100 gal. available for prompt delivery. Wide variety of types, voltages, controls and accessories to suit. Typical models shown below.

"CN" 3-heat dispensing heater with needle valve orifice. Hand or foot operated.

"WV" melting pot with removable liner and bail, for heating wax, compounds, pitch, etc. Variable thermostat.

FOR solving special compound melting and handling problems, let the STA-WARM DATA SHEET organize salient factors affecting output, capacity, application. Then ask for Sta-Warm Engineering Service.

WRITE FOR Sta-Warm DATA SHEET and QUESTIONNAIRE

Sta-Warm ELECTRIC CO.

130 N. CHESTNUT ST. • RAVENNA, OHIO

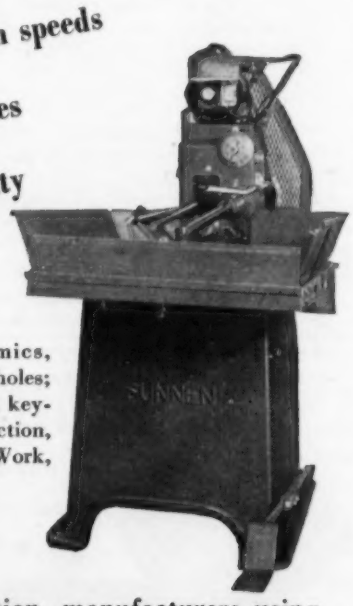
For more details circle NED-2877 on enclosed inquiry slip

HOLES MADE TO ORDER

From simple deburring to exact sizing and finishing,

New Model Sunnen Honing Machine Cuts Production Costs

- Higher production speeds
- Instant set-up
- No jigs or fixtures
- Heavier loads
- Greater flexibility
- Longer life



Hones metals, ceramics, glass; open and blind holes; holes with ports, lands, keyways. Ideal for Production, Salvage, Tool and Die Work, Maintenance.

Without an exception, manufacturers using Sunnen Honing have found that their own products run faster and quieter, perform better, last longer with Sunnen Honed bearings and cylinders. That's because they get just the right surface finish and the exact dimensional tolerance required.

And now Sunnen Honing is easier and faster than ever. Recent improvements speed up loading and unloading . . . provide smooth, vibrationless operation . . . increase operator efficiency. Diameter range, .120" to 5.5"; dimensional accuracy guaranteed to .0001"; surface finish to 2 micro-inches RMS in hardened steel. Average installation costs less than $1,000. Investigate now—Sunnen Honing may be your answer, too! Write for details of the new Model MBB Honing Machine.

SUNNEN PRODUCTS COMPANY

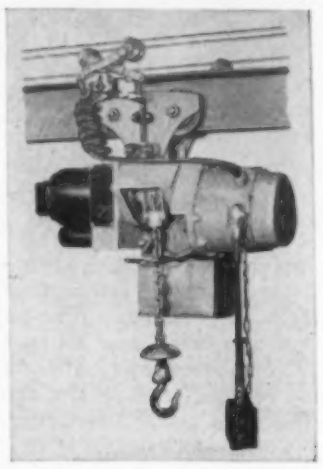
7972 Manchester Ave., St. Louis 17, Missouri

Canadian Factory: Chatham, Ontario

-520

For more details circle NED-2878 on enclosed inquiry slip

ELECTRIC HOIST
has lifting speeds up to 41 fpm

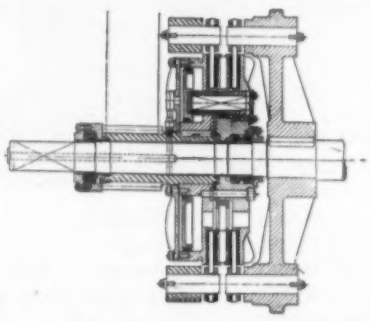


Available in load capacities of 500, 1000 and 1500 lb, Load King chain type electric hoist lifts loads through any height up to 40 ft. Link chain over electrically driven sheave supports load. This permits long lifting lengths since wound-up chain collects in metal container as hook raises. Hoist hook can reach out as far as 30 degrees from vertical to pick up loads. Limit stops prevent overtravel of hook when lifting or lowering. They operate when hook reaches predetermined levels and break electrical circuit to return pushbutton controller from either 'up' or 'down' position to 'neutral'. Made by **Yale & Towne Mfg. Co.**, Philadelphia Div., Dept. M-1, Roosevelt Blvd. & Haldeman Ave., Philadelphia 15, Pa.

For more details circle NED-2879 on enclosed inquiry slip

PNEUMATIC FRICTION CLUTCH
features electric control system

Selective stopping of press at various positions of stroke is operating convenience of type L pneumatic friction clutch. Electrical control system with palm buttons affords safety in inching and single stroking. Automatically lubricated brake and clutch are self-adjusting over wear-life of linings, which can be replaced without removing clutch or driveshaft assembly from press. Unit can be installed on presses in field without disturbing present clutch shaft support bearings, flywheel or driving arrangement. It can be used with or without antifriction driveshaft support bearings. Made by **E. W. Bliss Co.**, 1423 Hastings St., Toledo 7, O.



For more details circle NED-2880 on enclosed inquiry slip

MINIATURE SNAP-ACTION SWITCH
measures only 49/64 x 3/8 x 1/4-in.

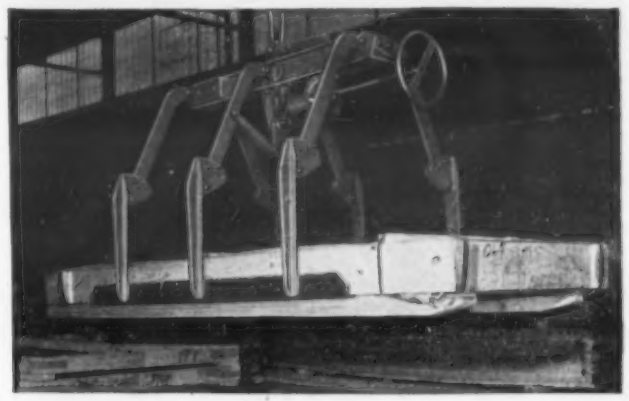
This thumb-nail size precision switch has 'pin' plunger actuator, solder lug type terminals and single-pole double-throw circuit arrangement. Lightweight unit is enclosed in plastic case and is rated 5 amp at 115 to 230 v ac and 2 amp at 28 v dc. Maximum operating force required is 7 oz, and minimum release force is 1 oz. Maximum movement differential is 0.03-in., maximum pretravel is 0.008-in. and minimum overtravel is 0.005-in. Made by **First Industrial Corp.**, 205 S. Chicago Ave., Micro Switch Div., Freeport, Ill.

For more details circle NED-2881 on enclosed inquiry slip

AIR-OPERATED DROP STAMP
produces variety of metal shapes

By using impact blows of controlled intensities, model L Cecostamp air-operated drop stamp can be used to produce bus and automobile bodies, sheet metal aircraft parts, rail cars, home appliances and agricultural implements. Machine is 10 per cent more powerful than previous models. Control mechanisms are located so that operator is free of moving parts; and with overhead safety rest control, operator stands solidly on both feet. Frame-to-anvil bolts and springs are recessed to avoid hazards to clothing, and positive self-positioning safety rests hold ram when operator is changing dies or working between dies. Fabreeka pads cushion yoke-to-frame joints, and automatic lubrication of valve cylinder and guides prolongs life of these parts. Made by **Chambersburg Engineering Co.**, 53 Derbyshire St., Chambersburg, Pa.

For more details circle NED-2882 on enclosed inquiry slip



HERE'S SHEET HANDLING ECONOMY

No better demonstration of the efficiency, flexibility and economy of C-F Lifters can be made than to watch this 5 ton C-F Lifter handle all sheet steel movement in this busy Chicago district warehouse.

C-F Lifters have quick opening jaws with infinite opening and closing adjustments, permitting them to handle a wide variety of sheet widths—wide bearing angles that safely lift sheets without crimping edges—end control to permit close quarter operation—positive jaw controlling mechanism that holds the jaws open in any position—these and many other exclusive features make C-F Lifters a good investment in materials handling equipment.

C-F Lifters are made in manual and motor operated models in sizes to handle from 2 to 60 tons in standard and semi-special designs.

Write for the Bulletin "C-F Lifters"—it describes the advantages and economies C-F Lifters can bring to your sheet handling jobs.

CULLEN-FRIESTEDT COMPANY

1304 S. Kilbourn Ave., Chicago 23, Ill.

For more details circle NED-2883 on enclosed inquiry slip

HAVE YOU EVER BOUGHT YOUR WIFE A MINK COAT AT RABBIT PRICES?

SAVE UP TO 85% IN WAR SURPLUS

We've gone NUTS!!

Just Purchased 180,000 lbs. of the FINEST PRECISION Made ELASTIC & FIBER LOCK NUTS!! All are NEW!!

Here's your chance to "STEAL" Aircraft Quality STOP NUTS at less than the cost of common commercial hex nuts. They're ALL NEW Cad plated Steel and a large quantity are even pre-tapped for easier wrenching. ELASTIC or FIBER LOCK SEAL gives a Positive, Shake-proof, Vibration & Rust Resistant fastener. No lock washer necessary. One Operation does the job. Just run on the nut. Ideal for use in all types of metal fabrication, assembly, construction etc.,

ALL NEW! AND LOOK AT THESE PRICES for ELASTIC or FIBRE LOCK STOP NUTS

Prices per 100 in these quantities - Special Discount for larger quantities -

	100	1000	10,000	25,000	50,000	100,000	500,000
640	$.49	$.25	$.21	$.19	$.17	$.15	$.13
832,836	.59	.31	.28	.25	.23	.21	.19
1032	.59	.31	.28	.25	.23	.21	.19
1/4-28 FL	.63	.39	.36	.33	.30	.27	.19
1/4-28 PT	.63	.39	.36	.33	.30	.27	.25
5/16-24PT	.84	.64	.61	.58	.56	.54	.49
3/8-24PT	.94	.74	.71	.68	.66	.64	.59

Note: FL means Fiber Lock (not pre-tapped.) PT means Pre-tapped. ESSNA Brand.

ARO PISTOL 17.95

AIR DRILL or AIR MOTOR with 1/4" Jacobs chuck.

AIR TOOLS

10,000 in various makes, sizes & types. Cleco, Aro, Ingersoll Rand, Chicago Pneumatic, Buckeye

$55.00 VALUE Pistol or Gooseneck

NO.181 PISTOL Only $8.95

NEW BEARINGS

These are the Finest, Precision, AIRCRAFT BEARINGS!! We have more than 168 types and sizes in TREMENDOUS QUANTITIES!!! Needle, Roller, Recessed, Rod End, Shielded, Unshielded, Self-aligning, etc. Made by some of the WORLD'S LEADING MANUFACTURERS OF BEARINGS... Yours at a FRACTION of COMMERCIAL PRICES. Write for complete list.

PALLEY SPECIALS on HYDRAULIC PUMPS & CYLINDERS

P-1 PESCO PUMP - Positive displacement gear type. Capacity: 1 gal. per minute, at 1500 RPM at 1500 PSI. Operating speed: 3700 RPM intermittent max. 4500 RPM. Rotation: either direction with slight adjustments. $9.49

NEW HYDRAULIC CYLINDER NEW 22.50

Gives 20,000 lb. thrust (push or pull) using 1500 PSI line pressure as obtained from our hyd. pumps. Will produce up to 40,000 lbs. thrust with 3,000 PSI. CAN ALSO BE OPERATED ON LOW PRESSURE AIR SYSTEMS. 4" bore, 18" stroke, 30½" length. Ideal for Road-Farm-Shop Machinery.

BENDIX HAND PUMP

Provides instantaneous power to operate Hydraulic Systems. Delivers 3000 to 5000 PSI. Has built-in reservoir and Pressure Relief Valve. Can be adapted to 100's of uses in simple hydraulic systems. N.S.N. $15.95 Used - Good Condition 11.95

P-4 VICKERS ANGLE PUMP

Positive displacement type, angle piston. Displaces .507 cu. in. per revolution. Has capacity of 6 gal. per min. at 3000 RPM at 1500 PSI. Pressure limit is 1500 PSI continuous, 1875 for 15 sec. Operating speed of 3750 RPM, intermittent maximum 4500 RPM. Rotates to the right only. $14.49

NEW HYDRAULIC CYLINDERS 87 TYPES & SIZES in the WORLD'S LARGEST SUPPLY. Send for Catalog.

PALLEY SUPPLY CO. DEPT. NED-4 6321 SAN FERNANDO RD. GLENDALE 1, CALIF.

NEW 1950 CATALOG 72 pages of Machine Tools (taps, drills, dies reamers, etc.) Hydraulic Cylinders & Valves, Air Tools, Bearings. Write Today for your Copy.

For more details circle NED-2884 on enclosed inquiry slip

Topflight Tape TOPFLEX

NEW RUGGED PRESSURE—SENSITIVE TAPE CONSTRUCTION

EXCLUSIVE WITH TOPFLIGHT

Rugged printed tape for marking, coding, labeling. Resists extremes of temperature and humidity. Printed surface protected from abrasive action. Available in choice of colors.

MADE TO ENGINEERS SPECIFICATIONS

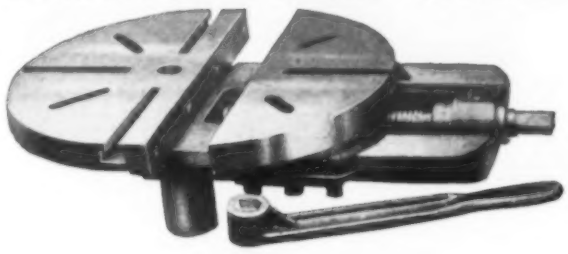
TOPFLIGHT TAPE COMPANY

YORK, PENNSYLVANIA, U. S. A.

For more details circle NED-2885 on enclosed inquiry slip

Try the MODERN

SAFETY DRILL TABLE



For Faster, SAFER Work in Your Maintenance Department

Combines a drill table, a vise, a set of parallels and V block. No more lost fingers from hand held jobs that slip. No more 30 minute set-ups for a 1 minute drilling operation. Made in 6 sizes from 8" to 28" dia. We guarantee each Safety Drill Table will save its cost on labor alone in 6 months, to say nothing of plant down time when vital maintenance is delayed even a few minutes.

FREE TRIAL OFFER

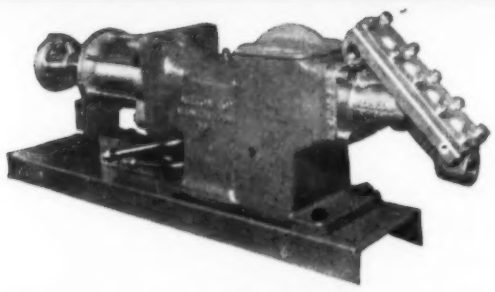
WRITE FOR FREE FOLDER

Shows many typical set-ups and use on radial drills. Complete specifications on all models. Covers MONEY BACK GUARANTEE and 30 DAY FREE TRIAL OFFER.

MODERN MACHINE TOOL CO.
Jackson, Michigan

▲ For more details circle NED-2887 on enclosed inquiry slip ▲

MILTON Roy PUMPS



New! "aiROYmetric"

CONTROLLED VOLUME CHEMICAL PUMPS

These are positive displacement, precision metering units, with the exclusive Milton Roy double-ball check liquid ends, powered by simple air cylinders. Plunger stroke length (capacity) is adjustable while operating by means of screw and hand-wheel. Capacities from 0.4 to 405 GPH. Pressures to 20,000 psi. Plunger diameters from 3/16" to 3½". For controlled volume pumping . . . practically all chemicals, slurries, solids in suspension etc. Sanitary liquid ends are available. Ideal units for automatic feed systems. Write for diagrams and complete details.

MILTON Roy COMPANY
1304 E. MERMAID LANE, CHESTNUT HILL, PHILA. 18, PA.

▲ For more details circle NED-2888 on enclosed inquiry slip ▲

See These?

They join pipe in 30 seconds!

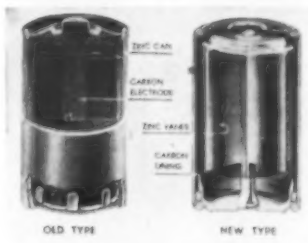
Dresser "No-Thread" Fittings join pipe *permanently* in less time than it takes to tell about it. Simply stab a fitting over plain pipe ends, tighten end nuts with a wrench. That's all. No threading to weaken pipe wall. No exact pipe fitting or aligning needed. Resilient gaskets absorb vibration, expansion, contraction. Use on gas, oil, air and water lines from 3/8" to 2" I.D. Write today for catalog.

DRESSER "NO-THREAD" FITTINGS

Dresser Manufacturing Division (One of the Dresser Industries), 59 Fisher Ave., Bradford, Pa. In Texas: 1121 Rothwell St., Houston. In Canada: 629 Adelaide St., W., Toronto, Ont. Sales Offices: New York, Chicago, Houston, San Francisco.

▲ For more details circle NED-2889 on enclosed inquiry slip ▲

INDUSTRIAL FLASHLIGHT BATTERY container will never perforate



Container of No. 1050 Eveready industrial flashlight battery, made of zinc in former models, is constructed of carbon with zinc power vane as center element. Since carbon is inert to electrolytic action, container will not perforate irrespective of battery age or degree of discharge. Since it has no metal can to leak or corrode, cell will not swell, stick or jam in flashlight. It gives more light-minutes than previous cells and provides more than double the usable light. This battery is completely interchangeable with all D size units. Made by National Carbon Div., **Union Carbide & Carbon Corp.**, Dept. NE, 30 E. 42nd St., New York 17, N. Y.

▲ For more details circle NED-2890 on enclosed inquiry slip ▲

DUST COLLECTOR has high volume air suction

Having ample storage capacity, Dustbuster low cost bag type dust collector can be used in conjunction with various woodworking operations as well as with milling and high speed routing of masonite and plastics. It is supplied as complete unit with self-clearing paddle wheel fan driven by ⅓-hp continuous-duty 3600-rpm motor. With 5-in. inlet, capacity is 633 cfm. Double 3-in. or single 4-in. inlets are optional.

Galvanized caster-mounted trash can is enclosed in housing that supports blower and filter. Discharge from blower is through canvas sleeve clamped to gasketed can cover to which filter is fastened. Hand shaker crank permits periodic cleaning of filter. Price for standard unit is $165. Made by **Aget-Detroit Co.**, 201 Main St., Ann Arbor, Mich.

▲ For more details circle NED-2891 on enclosed inquiry slip ▲

SMALL GASOLINE-ELECTRIC PLANT ratings range from 350 to 1000 w ac

Powered by lightweight gasoline engine, Power Bug incorporates permanent magnet type alternating current generator. It is obtainable as 400-cycle unit, with 60-cycle model presently available. Complete with 1-hp engine, 350-w 110-v ac set weighs only 28 lb and is about size of typewriter. Generator consists of only two parts: rotor and wound stator. Radio interference is eliminated by shielding of ignition.

Several direct current models are offered also. These include 110-v dc unit for powering small tools with universal motors, 6 and 12-v dc battery chargers, and combination unit where 6-v dc and 110-v ac can be used simultaneously. Made by **Gico Inc.**, Dept. 20, 1820 N. Nash St., Arlington, Va.

▲ For more details circle NED-2892 on enclosed inquiry slip ▲

WOODWORKING DRILLS all five sizes have ¼-in. shank

Making it possible to drill up to ½-in. diameter holes with any drill press or electric, breast or ratchet drill having standard ¼-in. chuck, this No. 14 set contains five woodworking drills: ¼, 5/16, ⅜, 7/16 and ½-in. size. Drills are precision ground, can be sharpened repeatedly and are recommended for drilling both hard and soft woods; Masonite; fiber board and soft metals such as aluminum, brass and thin sheet steel. Made by **Cleveland Twist Drill Co.**, 1240 E. 49th St., Cleveland 14, O.

▲ For more details circle NED-2893 on enclosed inquiry slip ▲

The most versatile fixture for quick accurate indexing... **SUPER-SPACER**

This fixture allows rigid control of accurate machining operations within its scope at speeds and feeds limited only by the capacity of the holding means and the power of the machine. Standard mask plates have 2, 3, 4, 6, 8, or 12 divisions. Specials made to order. All Super-Spacers come complete with mask plates, Universal chuck and chuck wrench. Write for Bulletin S-101.

HARTFORD *Special*

The HARTFORD SPECIAL MACHINERY Co., Hartford 5, Conn.

▲ For more details circle NED-2894 on enclosed inquiry slip ▲

A handful of hands turns out more jobs at LOWER COSTS

ROTARY ELECTRIC IMPACTOOL

- Runs Nuts
- Taps
- Reams
- Drills Masonry
- Wire Brushes
- Drives Screws
- Drives Studs
- Saws Holes
- Drills
- Bores Wood
- Extracts Broken Studs

A "handful of hands" and all the ability they provide are *yours* with ONE amazing Ingersoll-Rand Impactool — the sensation of the electric tool field.

YOU CANNOT STALL AND BURN OUT THE MOTOR . . . . Should you stall the spindle completely the motor continues to run.

YOU GET NO KICK, NO TWIST . . . . It's easy to use even on the toughest jobs.

YOU CAN SAVE UP TO 90% OF NUT RUNNING TIME ALONE . . . . The Impactool easily pays for itself in 30 days or less.

Seeing is Believing **Ingersoll-Rand**
11 Broadway, New York 4, N. Y.

Ask your distributor for a demonstration of this amazing, time-saving, labor-aiding impact

468-18

▲ For more details circle NED-2895 on enclosed inquiry slip ▲

SLASH FASTENING COSTS

on nut-and-bolt assemblies with

PALNUT TRADEMARK SELF-LOCKING **NUTS**

"PAL" Trademark Reg. U. S. Pat. Off.

- Low in cost
- Vibration-proof
- Speedy assembly with hand or power drivers
- Small space
- Light weight
- Many types for various needs

On most light assemblies, a single PALNUT replaces comm nut and washers. You red material and labor costs — assembly time—save space weight, while gaining the sec ity of PALNUT double-lock action. Send details of fasten problem, for samples of P NUTS. Ask for literature entire line.

THE PALNUT COMPA
45 Cordier Street
Irvington 11, New Jersey

▲ For more details circle NED-2896 on enclosed inquiry slip ▲

For Positive Filtration

on all industrial oils, solvents and water

With an Alsop "Disc-Pak" Filter on your line, all of the liquid will be as clean and as sparkling as you specify. The enormous filter area yet small floor space requirement, the self-sealing principle, the elimination of complicated parts and the ease with which used cartridge elements can be removed, guarantees positive filtration with minimum get-ready time and operating costs.

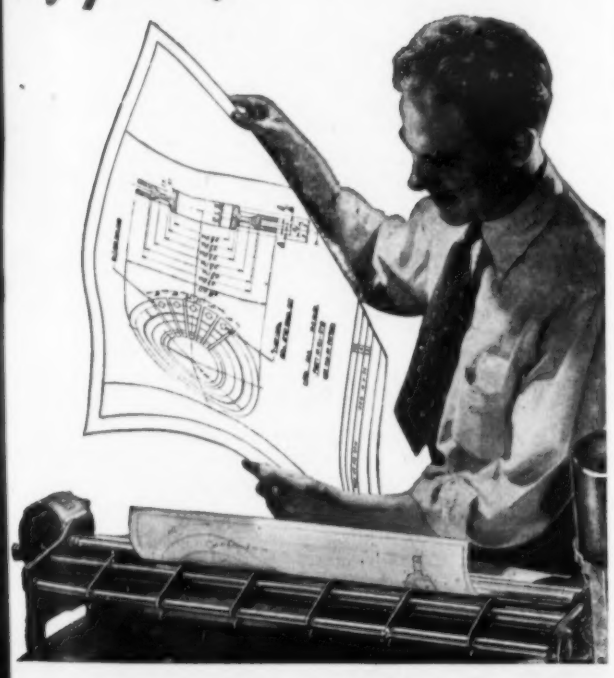
The replaceable-cartridge type elements are available in eight different grades from coarse, fast flowing to ultra-fine grades to remove particles in the sub-micron range. "Disc Pak" Filters are made in full range of sizes and capacities up to 3600 g.p.h.

Send for this Free Catalogue:
Alsop Engineering Corporation
504 East Road, Milldale, Conn.

ALSOP ENGINEERING CORPORATION
Filters, Filter Discs, Pumps, Tanks, Mixers, Agitators

▲ For more details circle NED-2897 on enclosed inquiry slip ▲

Ageproof VELLUM



Better Drafting and Better Prints

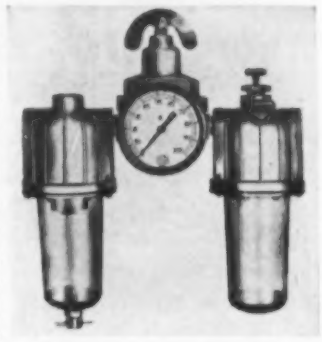
Unless you have tried Dietzgen's *Ageproof* Vellum it is not possible to appreciate the enthusiasm with which *thousands* have swung over to its *exclusive* use. They call it the *perfect* drafting medium . . . the finest surface for pencil or ink drawing they have ever had . . . a surface and transparency unimpaired by repeated erasures . . . a surface that *stays* clean for sharper, clearer prints. Dietzgen's *Ageproof* Vellum is plasticized through and through for *permanent* transparency. No oil, wax or grease to turn rancid, bleed, fade or capture dirt and dust. No yellowing or brittleness after years of storage. For better drawings for better prints...every time and all the time, use Dietzgen's *Ageproof* Vellum. In rolls, cut sheets, and printed sheets. For supplies or test sheets, call on your Dietzgen dealer or the nearest Dietzgen office.

EUGENE DIETZGEN CO.
Chicago • New York • San Francisco • New Orleans
Los Angeles • Pittsburgh • Washington
Philadelphia • Milwaukee
Dealers in All Principal Cities

DIETZGEN
DRAFTING, SURVEYING & PRINT-MAKING MATERIALS, INSTRUMENTS & EQUIPMENT

▲ For more details circle NED-2898 on enclosed inquiry slip ▲

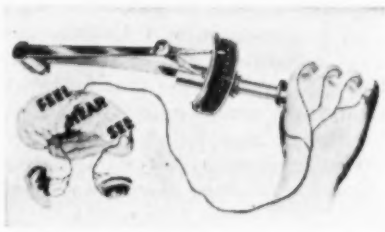
AIR LINE CONTROL UNIT
cleans, regulates and lubricates air



Consisting of model B Pur-O-Fier, Goodyer Pur-O Luber and regulator, illustrated air line control unit provides method of cleaning, regulating pressure and lubricating compressed air lines. Pur-O-Luber component completely atomizes oil to insure proper lubricating film that will adhere to any surface contacted without forming drops or slugs. Regulator, gage and safety valve provide ample protection against excessive air line pressure. Pur-O-Fier unit which precipitates water and oil by scrubbing action of impinging baffles has transparent dirt entrainment bowl and can be cleaned through petcock. Made by **Airlube, Inc.**, Dept. D, 332 S. Michigan Ave., Chicago 4, Ill.

▲ For more details circle NED-2899 on enclosed inquiry slip ▲

TORQUE WRENCH
indicates proper torque three ways



Trip lever of Proto high speed torque wrench is set at desired torque reading; and when wrench is pulled to this reading, lever trips signal trigger. At same time, strong definite impulse is imparted to hand and loud click is sounded. Resulting sensations of feeling and sound cause operator to release wrench at desired torque setting. Operator can also watch pointer advance along dial to see when proper torque is reached. With three methods of control supplied, operator can work under adverse conditions of light, vision and noise. Twelve sizes available have capacities ranging from 25 to 3600 lb-in. Made by **Plomb Tool Co.**, Dept. D, 2209 Santa Fe Ave., Los Angeles 54, Calif.

▲ For more details circle NED-2900 on enclosed inquiry slip ▲

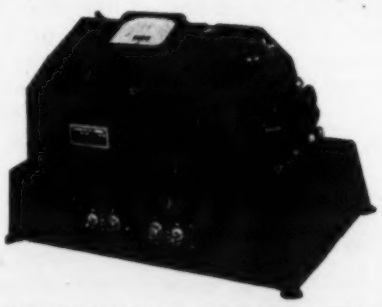
PORTABLE DISK SANDER
has full-load speed of 3200 rpm

Usable for general sanding operations on wood, metal, plastics and other surfaces, model 60 lightweight disk sander reaches into corners and other relatively inaccessible places. Balanced air-cooled motor of sealed ball-bearing construction carries 6-in. diameter sanding disks at no-load speed of 4500 rpm. Operating on 110-v ac or dc, 5½-lb tool is 8-in. long. Made by **Jones Motrola Corp.**, 439 Fairfield Ave., Stamford, Conn.

▲ For more details circle NED-2901 on enclosed inquiry slip ▲

COLOR MATCHING INSTRUMENT
handles samples from ½-in. diameter

Five times more sensitive than human eye, Color-Eye precision color matching instrument can be used for many textile, dye and other applications. It uses combined electronic and optical computing system to simulate response sensitivity and discrimination characteristic of human eye without eye's variance in perception. In operation, instrument accommodates itself to illumination level of samples being compared. This permits comparison of samples reflecting only 2 per cent to accuracy of ½ per cent of reflected light. For evaluation of tristimulus color values relative to standard whites, unit is equipped with mitrometric slit and direct reading scale from 0 to 100 per cent. To make certain surface conditions and illumination are comparable to visual measurements prior to actual color determination, samples can be examined with Sample Viewer accessory which fits into transmission slide of instrument. **Instrument Development Laboratories,** 165 Highland Ave., Needham Heights, 94, Mass.



▲ For more details circle NED-2902 on enclosed inquiry slip ▲

FOR LOW COST LIFTING and LOWERING

The portable Keller Air Hoists. One man can lift, lower loads effortlessly from creep up to 17 ft per min. Hoists weigh only 30 lb in ½-ton, ¼-ton, 300-lb capacities and 75 lb for 1-ton. Provide maximum power with minimum air consumption, servicing, and attention.

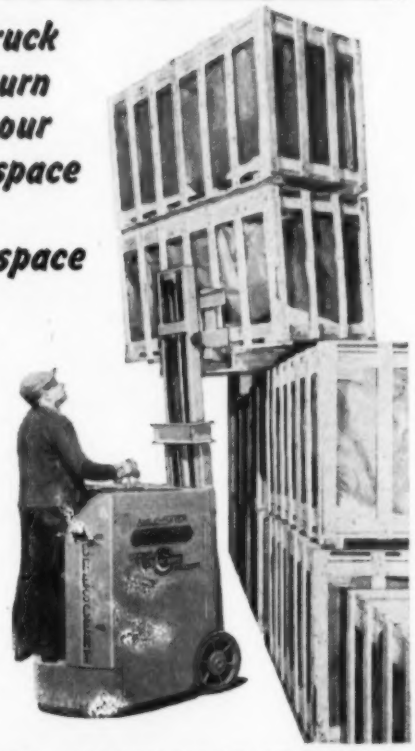
KELLER
Pneumatic Tools

KELLER TOOL COMPANY, GRAND HAVEN, MICH.

▲ For more details circle NED-2903 on enclosed inquiry slip ▲

Crescent Aisle Saver

The only truck that can turn 24% of your dead aisle space into "pay-load" space



The CRESCENT Aisle Saver is completely maneuverable in 8-foot aisles—instead of 10½-foot aisles as required by many fork trucks of equal capacity. It is the only truck that can right-angle tier from 8-foot aisles with a 2000-pound, 42-inch pallet load. Send for free, illustrated bulletin with full specifications.

CRESCENT TRUCK CO., 1050 WILLOW ST., LEBANON, PA.
Electric Industrial Truck and Tractor Specialists Since 1917

▲ For more details circle NED-2904 on enclosed inquiry slip ▲

With
DAYTON ROGERS

LAYOUT FLUID

Speed up your lay-out work time, relieve eye-strain and improve accuracy. No time wasted polishing surface. Just wipe off and apply this deep Die Blue with brush. DRIES INSTANTLY! Use on steel, brass, aluminum, stainless steel, tin, copper. Also splendid for periodic piece inspection to check accuracy of production runs, all tool work, etc.

DAYTON ROGERS
Manufacturing Company
MINNEAPOLIS, 7, MINN.

SEND FOR YOUR FREE SAMPLE

▲ For more details circle NED-2905 on enclosed inquiry slip ▲

How to get a big return on 6 sq. ft. of floor space

Out of this small floor space and this highly versatile Stanley-Carter heavy duty overarm router and shaper you'll get thousands of forming, cutting, trimming, recessing, paneling jobs at a minimum cost. Full 1-h.p., 18,000 r.p.m. motor with large shaft and oversize bearings produces smooth, clean cuts that need no hand finishing. Pin holder, underside of table, for various size templet pins. Motor unit transferred to tilting holder under table converts machine from router to shaper. Also available without shaper facilities or without pedestal and table for mounting on your own pedestal or bench. Ask your industrial distributor or write for catalog. Stanley Electric Tools, 563 Myrtle Street, New Britain, Conn.

STANLEY
Reg. U.S. Pat. Off.

HARDWARE • TOOLS • ELECTRIC TOOLS • STEEL STRAPPING • STEEL

▲ For more details circle NED-2906 on enclosed inquiry slip ▲

Automatic Batch Counter

Counts tens, dozens, hundreds or any predetermined quantity and automatically controls marking, separating or packaging equipment.

MONITOR Automatic BATCH COUNTERS

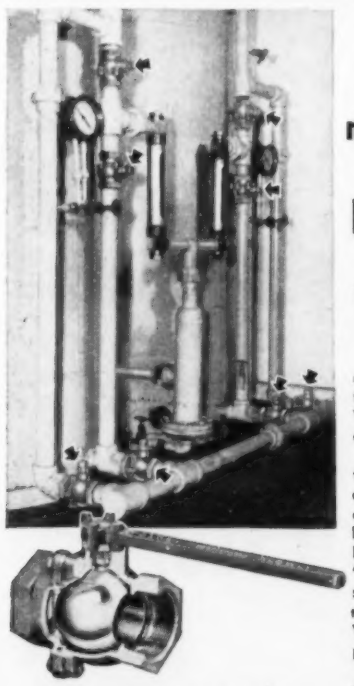
Monitor Electric Batch Counter, *counts any BATCH Quantity* of parts, packages, sheets, measurements or operations *and automatically controls* Batch Marking or separating devices, pile changers, kick out devices, conveyors, etc., *without slowing down production or missing a single count.*

Proved thru more than ten years use. Extremely adaptable. Tell us what you want to do or send for Bul. MBC-52.

32 pages of Batch Counting Case Histories, application information, etc. Send for Bul. MBC-52.

Production Instrument Company
700-12 W. JACKSON BLVD., CHICAGO 6, ILL.
Representatives in Principal Cities

▲ For more details circle NED-2907 on enclosed inquiry slip ▲



REDUCE maintenance cost with ROCKWOOD BALL TYPE VALVES

Longer service life with no maintenance is a primary advantage of the Rockwood Ball Type Valve that pays off in dollars and cents year in and year out.

The maintenance engineer of this large gas company was quickly convinced that his choice of Rockwood Valves for gasoline lines on "sweetening towers" had been sound. Says this engineer, "The full *round* flow, leak proof service, easy operation and no maintenance cost make Rockwood Valves far ahead of any competitive valve we used."

Rockwood Valves are today giving excellent performance on difficult operations in oil refineries, food, paper, chemical and rubber plants, etc. It will pay you to specify and buy Rockwood Valves. Send for bulletin V-4. Distributors in all principal cities.

Rockwood Valves are recommended for 300 p.s.i. working pressure. Made in bronze with screwed ends in all pipe sizes from ½" to 2".

ROCKWOOD SPRINKLER CO.
44 HARLOW STREET WORCESTER 5, MASS.

▲ For more details circle NED-2908 on enclosed inquiry slip ▲

New Processes and Materials

INDUSTRIAL MARKER KIT contains both marker and ink

This industrial marker kit consists of Felt-Tip marker packaged with ½-pt can of ink. Marker is made of aluminum and brass, measures 7½ in. long and weighs 2¾ oz. Ink is fed by pressure-sensitive tip that assures proper amount in tip at all times. Marker is recommended for all free-hand marking applications. Made by **Ideal Stencil Machine Co.**, Dept. NED, 134 Iowa, Belleville, Ill.

▲ For more details circle NED-2909 on enclosed inquiry slip ▲

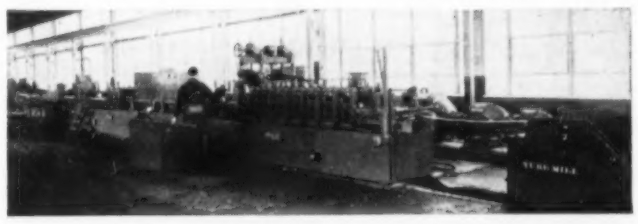
METAL ELECTROCLEANING method usable on steel and copper

Either reverse or direct current can be employed with No. 12 electrocleaner to produce waterbreak-free and smut-free surfaces on steel, copper and copper alloys. Perfect adherence of subsequent plating is thus assured. High wetting and emulsifying powers enable cleaner to reach recesses and low current density areas. Limited foam blanket produced during cleaning prevents solution spraying into room. Made by **Diversey Corp.**, Metal Industries Dept. D, 53 W. Jackson Blvd., Chicago 4, Ill.

▲ For more details circle NED-2910 on enclosed inquiry slip ▲

WELDED STEEL TUBING of 24 to 11-gage with ½ to 3-in. OD

Available in cut lengths of 4 ft and up, flash-in grade of resistance welded steel tubing is supplied in stainless, carbon, alloy, cold-rolled or hot-rolled stock from 1010 to



1035 analyses. Ability to meet individual specifications for tubing of high quality and close uniformity is result of addition of new cold-rolling mills, annealing furnace and illustrated McKay tube machine. Tubing is made by **Wallingford Steel Co.**, 1007 Valley St., Wallingford, Conn.

▲ For more details circle NED-2911 on enclosed inquiry slip ▲

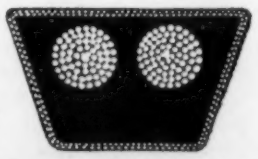
STRIPPABLE COATINGS plastic gives processing protection

Recommended as temporary protection during processing, storage and shipping, SP-14 strippable coating for enameled, lacquered and plastic surfaces and No. 532 Dip-Pak hot-melt coating for metal parts such as tools, gears and machined components can both be skinned from object prior to further processing. Strippable coating is light cream-colored liquid with good stability and neutral pH, is nonflammable, and can be applied by spraying. For best results, it is recommended that parts over which this coating is sprayed be passed through drying oven at temperature of 140 to 150° F for 15 minutes. Hot-melt coating is supplied in briquet form and is melted and applied to object to provide transparent abrasive and moisture resistant film that sets up almost immediately as it comes into contact with air. This material can be reused by remelting. Made by **Fidelity Chemical Products Corp.**, Dept. WD, 470 Frelinghuysen Ave., Newark 5, N. J.

▲ For more details circle NED-2912 on enclosed inquiry slip ▲

HIGH CAPACITY V-BELT for general industrial usage

Developed for installations where space is limited and standard drive cannot be used, this oil-resistant high capacity Super-7 Texrope belt has 40-per cent higher rating than standard belt. It maintains same stretch characteristics as standard belt and has same factor for safety. Recently, it has been finding more general use in industry since cost of complete drive utilizing high-capacity belt is generally less than for standard drive. Where specified, this belt can be made static resistant. Made by **Allis-Chalmers Mfg. Co.**, Dept. 1233, 6900 Norman St., Milwaukee 1, Wis.



▲ For more details circle NED-2913 on enclosed inquiry slip ▲

1 CUTTER FOR 3 CLASSES OF WORK!

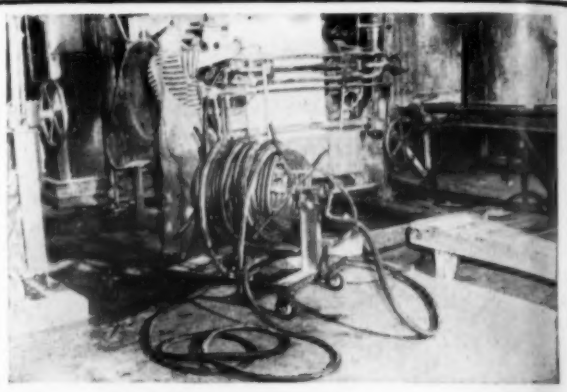
Switch to another set of standard solid carbide blades and use this body for any face milling job on any material. Here are features and simplicity tool men like—easy blade interchange, no threads in the body, wedges behind the blades to take the shock and spare the body. Blades properly ground for various classes of work are stocked by Super and ready for immediate shipment. See Super Tool Company's Standard Carbide Tipped Tool Catalog No 47. If you need a copy, write for one today.

Aluminum! Dural, Magnesium, Plastics, Etc. *Steel!* *Cast Iron!* Brass, Malleable Iron, Etc.

STANDARD AND SPECIAL **SUPER** *Carbide Tools*

SUPER TOOL COMPANY
21650 HOOVER RD., DETROIT 13, MICH. • 5210 SAN FERNANDO RD., GLENDALE 3, CAL.

▲ For more details circle NED-2914 on enclosed inquiry slip ▲



Condor HOMOFLEX HOSE Weighs Less . . . Coils Quicker

It is the most flexible hose construction ever designed. It weighs less per 100′ than any other hose for equal working pressure. It does not kink, and coils easily in any direction.

The Homoflex construction eliminates the need for thick, stiff hose walls. During vulcanization, the Flexlastics tube and cover join through the cords of the hose wall to make an inseparable unit. Homoflex is perfectly balanced and wears evenly.

Buy Condor Homoflex Hose. It lasts longer and you save money. Available in sizes up to and including 1" inside diameter. Styles for Air, Oil, Water, Suction, Spray and other uses. Write for Bulletin #6879D.

RM RAYBESTOS-MANHATTAN, INC.
MANHATTAN RUBBER DIVISION, PASSAIC, NEW JERSEY

▲ For more details circle NED-2915 on enclosed inquiry slip ▲

Plenty of Places...

Where this 3-in-1 Workhorse Will Save Time and Work

Table Top 26" x 43"

IMMEDIATE SHIPMENT

IT'S A WORK BENCH A work bench on wheels, with a steel top that moves up and down—that's the Service "Liftable".

IT'S A TRUCK Perfect for moving heavy dies, assemblies from one spot to another . . . saves lifting and carrying.

IT'S A LIFTER Transfers heavy units from one table height to another merely by cranking the top up or down to any height from 28" to 42".

To move heavy pieces, dies, assemblies vertically from one level to another—and then horizontally from one place to another — use the Service LIFTABLE. Lowered, the top is 28" from floor . . . raised, it's 42". Capacity 2000 lbs. . . . chain and screw lifting mechanism . . . all welded construction . . . locks positively at any height . . . readily portable. Cut handling costs—put LIFTABLES in your plant.

Get Descriptive Circular—Write Today.

SERVICE CASTER & TRUCK CORP.
INDOOR MOVERS Made EASIER and SAFER
Executive Offices: Albion, Michigan
Plants at Albion, Michigan and Somerville 43, Mass.
See your classified Telephone Directory for name of nearest Service Distributor

▲ For more details circle NED-2916 on enclosed inquiry slip ▲

Ready FOR You!

New Bulletin

Presents NOPAK "Series 1500" High Pressure Hydraulic Cylinders

Designed for heavy duty service at high pressures, the New 1500 Series embodies features which contribute to long-range dependability and trouble-free operation. Included are: Positively Locked Piston Assembly, Tubing Flanges secured by Locklings, Compensating Rod Wipers, "O"-Ring Static Seals between heads and tubing. Available in 5 standard mountings with or without Adjustable Cushioning.

GALLAND-HENNING MFG. CO., 2755 S. 31st Street, Milwaukee 15, Wis.

WRITE FOR NOPAK BULLETIN HC-1

Representatives in Principal Cities

NOPAK VALVES AND CYLINDERS
DESIGNED for AIR and HYDRAULIC SERVICE

A 5741-1/9

For more details circle NED-2917 on enclosed inquiry slip

NEW PRINCO

DENSITROL*
LIQUID DENSITY INSTRUMENT
APPLIES LABORATORY ACCURACY TO PRODUCTION

NOW a fully dependable liquid density instrument is available designed for rugged production work, yet accurate to laboratory standards. Unaffected by ordinary plant conditions, the DENSITROL* provides continuous indicating, recording and/or controlling of process liquid densities.

Overall density limits of the DENSITROL are from 0.6 to 3.5 d. with spans of 0.10 to 0.005 d. full scale or equivalent. It is available with manual or fully automatic compensation for temperatures up to 200° C. Models are furnished for pressures up to 150 p.s.i.

The DENSITROL is supplied in materials suitable for handling any liquids.

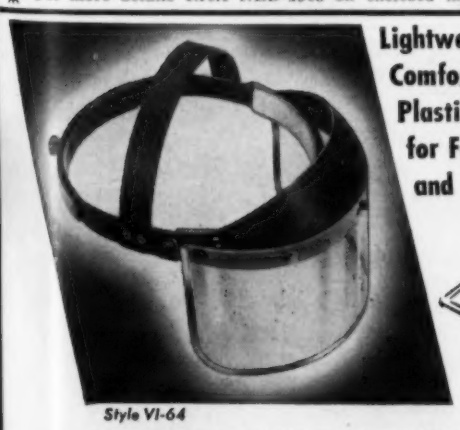
Write for full information today.

*Trademark

INDICATING
RECORDING
CONTROLLING

PRECISION THERMOMETER & INSTRUMENT COMPANY
PRINCO
"PRECISION INSTRUMENTS FOR INDUSTRY"
1400 Brandywine Street, Philadelphia 30, Pa.
In Canada: PEACOCK BROTHERS Limited

For more details circle NED-2918 on enclosed inquiry slip



Lightweight, Comfortable Plastic Protection for Face, Head and Eyes

Style VI-64

If you want the fellows doing light grinding, wood working, spot welding to wear eye protection, give them WILLSON Protecto-Shields*. The large, one-piece visor—4", 6" or 8" long—provides both front and side protection. The adjustable, padded headband provides a snug comfortable fit. Workers wear them for long periods without fatigue. There's plenty of room for prescription glasses and the visor swings up off the face when not in use.

VI Headgear, small browguard

V3 Headgear, large browguard

For complete information on these products and their application, as well as many more eye and respiratory protective devices, get in touch with your nearest WILLSON distributor or write us direct.

*T.M. Reg. U.S. Pat. Off.

WILLSON "Established 1870"

Willson Products, Inc., 219 Washington St., Reading, Pa.

For more details circle NED-2919 on enclosed inquiry slip

New Processes & Materials

ELECTROPLATING OF ALUMINUM obtained through immersion process

Many difficulties peculiar to electroplating on aluminum, such as blisters, pits and dull deposits, are eliminated when Alumetex process is utilized. High corrosion resistance and adhesion are obtained by simple immersion treatments with this process that can be used for all regularly encountered alloys of aluminum. Sand and die castings as well as wrought aluminum can be routed through same cycle.

Manufacturers are invited to send samples for plating. Type of plate and thickness of desposit required should be specified. Process developed by **Mac Dermid, Inc.**, 1008 Huntingdon Ave., Waterbury 88, Conn.

For more details circle NED-2920 on enclosed inquiry slip

DECORATIVE PLASTIC MATERIAL has three-dimensional appearance

Usable on both horizontal and vertical interior surfaces, Panelyte Cameo high-pressure laminated plastic material has patterned appearance although surface is smooth. It is available in gray, turquoise, yellow, green, blue, tan and red. It is mar and cigarette burn resistant; will not chip; can be kept clean and germ-free easily; will not pick up odors; and is not affected by alcohol, fruit juices, cosmetics and cleaning preparations. Made by Panelyte Div., **St. Regis Paper Co.**, Dept. NED, 230 Park Ave., New York 17, N. Y.

For more details circle NED-2921 on enclosed inquiry slip

ANTIRUST PAINT penetrates rust and seals surface

Rust protection is afforded by Rustrem Clear antirust paint which can be brushed or sprayed directly over rust without wire brushing or scraping. It can be painted over with any good quality paint except lacquer and will not bleed through. When it is applied as base coat, any desired finish color can be used. Paint is supplied in 1-qt, 1 and 5-gal cans and 55-gal drums. Made by **Speco, Inc.**, Dept. RSA, 7308 Associate Ave., Cleveland 9, O.

For more details circle NED-2922 on enclosed inquiry slip

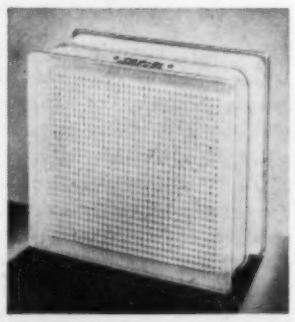
COPPER BRAZING PASTE used in furnace-joining of parts

Applied speedily and with little waste, Cubond copper brazing paste is produced in two general types: one with synthetic petroleum base and other containing base that does not change viscosity with changes in temperature. Consistency of petroleum base paste is sufficiently fluid to permit extrusion from guns without thinning. However, it can be thinned for application by brush, spray or dip. It will not settle, harden or dry in can or on job. Since nonpetroleum-base paste does not thin with temperature rise, it has less tendency to flow away from joint.

Also available are hand or pneumatic applicator guns which apply paste as extrusion in form of rounds or ribbons in definite quantity depending on trigger setting. Pneumatic type can be set for automatic operation and actuated by foot pedal, cam or electrical control. Made by **Metals Refining Co.**, 1717 Summer St., Hammond, Ind.

For more details circle NED-2923 on enclosed inquiry slip

GLASS BLOCK permits brightness control



This No. 55 glass block has opal glass fused into block junction to diffuse light which would otherwise be transmitted directly through block edge. Other functional features include fibrous glass insert used to diffuse light transmitted by block itself and light-directly prisms on interior faces of certain patterns. Blocks with fibrous glass inserts increase light-diffusing effect on extremely sunny exposures. Made by **Pittsburgh Corning Corp.**, 307 Fourth Ave., Pittsburgh 22, Pa.

For more details circle NED-2924 on enclosed inquiry slip

SAFEWAY... a new light weight chain hoist

Designed to keep pace with today's demands for greater efficiency in materials handling, this new Wright hoist is light in weight, high speed, compact, strong, easy to service, long lived. Capacities from ½ to 4 tons. Load chains of steel—heat treated—proof-tested—have high wearing qualities and high safety factor against possible impact loads. Load wheel reversible. Weston type brake resistant to high temperatures; cold, wet and dusty atmosphere. Send for bulletin DH-164.

WRIGHT HOIST DIVISION
American Chain & Cable
York, Pa.

For more details circle NED-2925 on enclosed inquiry slip

HAPMAN PNEUMATROLS

Now CONVEY CONTINUOUSLY INTO OR OUT OF PRESSURE or VACUUM ZONES WITHOUT PULSATION

HANDLE ANY *FLOWABLE* MATERIAL

This photo shows the testing set-up prior to shipping an installation of a Hapman circular flight chain conveyor equipped with Hapman Pneumatrols. The pressure-sealed Pneumatrols used with the Hapman pressure-tight, chain-link and flight assemblies, make it possible to convey any flowable material into or out of vacuum and pressure zones intermittently, continuously or it can be processed in motion through these zones. Complete information on request.

A. Motor and drive. B. Speed reducer. C. Dotted lines indicate position of pressurized hopper in actual installation. D. Tanks supplied air source for actuating Pneumatrols in test set-up. E. Receiving hopper. F. Standard take-up for Hapman chain conveyor.

HAPMAN CONVEYORS, INC. 2405-F W. McNichols Road Detroit 21, Michigan

For more details circle NED-2926 on enclosed inquiry slip

SCORE LOWER MAINTENANCE COSTS

With the ENSIGN ANTI-RUST TEAM...

318 PEN-A-TRATE

Non-corrosive, fast-acting penetrant. Low flash for moderate heat application. Non-solvent lubricant base speeds assembly, protects parts.

395 METAL PRESERVER

Seals rust out. Requires minimum preparation. Penetrates residual rust—seals against further rust action. For temperatures to 400° F.

383 CABLE PRESERVER

Double-acting, protects cable surface while lubricating every *internal* strand through the core. Users say it doubles cable life.

SATISFACTION GUARANTEED OR YOUR MONEY BACK!

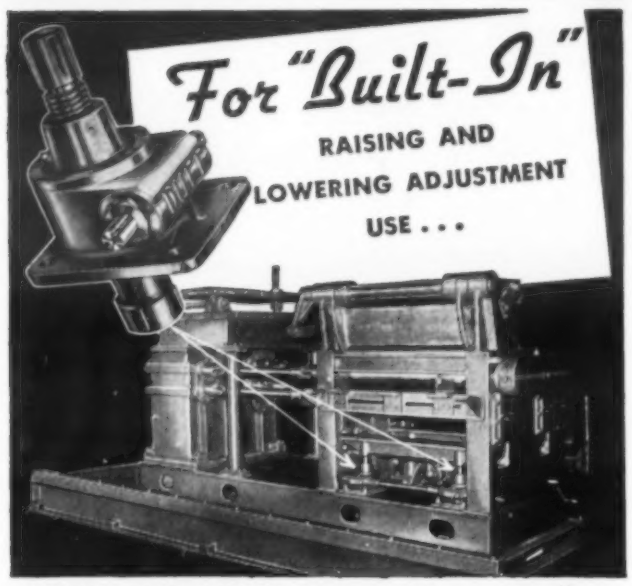
Write to

ENSIGN PRODUCTS COMPANY
3528 E. 76 St.
Cleveland 5, O.

Please send samples and information on The ENSIGN ANTI-RUST TEAM

NAME _____ TITLE _____
COMPANY _____
ADDRESS _____
CITY _____ STATE _____

For more details circle NED-2927 on enclosed inquiry slip



DUFF-NORTON Worm Gear Jacks

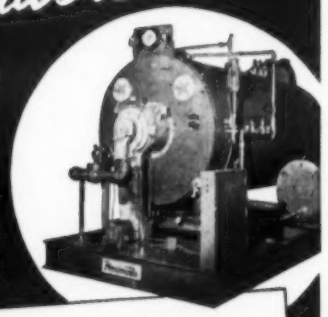
These jacks may be used singly, in tandem or in groups of four, six or eight, connected by means of shafts or mitre gears for raising and lowering mill tables, machine beds, presses, and many other applications. Capacities vary from 5 to 50 tons, with raises from 3" to 25". Jacks are furnished in accordance with load per jack, raise required and application.

For suggested applications write for Bulletin AD-5 H.

THE DUFF-NORTON MANUFACTURING CO.
MAIN PLANT and GENERAL OFFICES, PITTSBURGH 30, PA.
CANADIAN PLANT, TORONTO 6, ONT.
"The House that Jacks Built"

For more details circle NED-2928 on enclosed inquiry slip

ORR & SEMBOWER
Powermaster®
STEAM GENERATORS



High and low pressure units — 15 to 300 H.P. — for light oil, heavy oil, gas or combination gas-oil firing give you cost-cutting features like these . . .

- ✓ Low fuel consumption through high efficiency
- ✓ Packaged design saves excessive installation costs
- ✓ Automatic operation frees engineer for other duties
- ✓ Mounted on steel base — no bricking required
- ✓ Delivered fully wired and factory-tested
- ✓ A. S. M. E. constructed — U. L. approved
- ✓ Widespread service by factory-trained men

Get Catalog — Write
ORR & SEMBOWER, INC.
930 Morgantown Rd. • Reading, Pa.

For more details circle NED-2929 on enclosed inquiry slip

Prevent accidents. Provide comfort underfoot.

USE
AMERIFLEX WOOD LINK MATTING

Ideal for use around machinery. Keeps the feet off cold, damp floors. Lies flat. • Substantially constructed for long service. • Beveled ends prevent tripping. • Grooves allow drainage. • Rolls up for easy handling and cleaning. • Any width up to 42 inches. Any length.

AMERICAN MAT CORPORATION
"America's Largest Matting Specialists"
1733 Adams Street Toledo 2, Ohio

( ) Please send prices on Ameriflex Flexible Wood Link Matting.
Please send information on ( ) Neo-Cord Counter-Tred Safety Matting; ( ) Tuf-Tred Tire Fabric Matting; ( ) American Counter-Tred Safety Matting; ( ) Ezy-Rug Colored Rubber Link Matting; ( ) Tile-Top Sponge Matting; ( ) Traffic-Tred Matting; ( ) Do-All All-Purpose Rubber and Cord Matting; ( ) Ever-Tred Vinyl Plastic Link Matting.

NAME .....
FIRM .....
STREET .....
CITY & STATE .....

IN CANADA — OFFICES: American Mat Corporation, Ltd., Canada Trust Bldg., Windsor, Ont. FACTORY: West Lorne, Ontario

For more details circle NED-2930 on enclosed inquiry slip

New Processes & Materials

SOLDERING FLUX

Furnished in liquid form, flux is designed especially for use in gold and silver soldering operations. Made by **Handy & Harman,** Dept. N-10, 82 Fulton St., New York 7. N. Y.

For more details circle NED-2931 on enclosed inquiry slip

SEMIRIGID PLASTIC PIPE available in ½ to 2-in. pipe sizes

Having higher tensile and flexural strength than standard type, Carlon T semirigid extruded plastic pipe is suitable for suction lines as well as for lawn sprinkler systems, over-land piping, jet well installations and handling liquids intended for consumption. It can be used also for transmitting sewage; as conduit to carry high voltage wiring; and for processing or exhaust systems handling highly corrosive fumes, gases or vapors.

Being light in weight, pipe can be laid rapidly and economically. It is not subject to rot, rust and electrolytic corrosion; will not form galvanic couple; and is not damaged by freezing water. Supplied in random 20-ft lengths, sections are connected by plastic sleeves which can be furnished threaded to permit connection to metal pipe installations equipped with standard fittings. Made by **Carter Products Corp.,** 10237 Meech Ave., Cleveland 5, O.

For more details circle NED-2932 on enclosed inquiry slip

COLD LIQUID CLEANER dissolves grease rapidly

Being practically inert to ordinary electrical insulating materials, Cleaning Mixture No. 49 is effective cold spray compound for use in electric motor cleaning, automotive repair and general maintenance. It evaporates quickly and has low flammability and mild toxicity. Mixture is composed of 30 per cent by volume Du Pont Blend CC No. 49 and 70 per cent Stoddard Solvent. Made by **E. I. du Pont de Nemours & Co.,** Dept. NED 1242, Wilmington 98, Del.

For more details circle NED-2933 on enclosed inquiry slip

HIGH-STRENGTH STEEL effects savings in tank production

Water tanks constructed of Otiscoloy high-strength steel are lighter in weight yet stronger and longer lasting than mild steel tanks. Since material has yield strength nearly twice that of mild steel, thinner tanks meet standard 300-psi hydrostatic water pressure tests or 127-psi working pressure tests. Reduction in thickness is usually from 11-gage to 13-gage and results in weight saving of approximately 25 per cent. Material is four to six times more resistant to atmospheric corrosion and takes on better coat of galvanizing than mild steels. No special protection to counteract possible electrolytic action is required. This material welds equally as fast and soundly as clean mild steel and pickles in less time. Tanks made by Noland Tank & Galvanizing Co., steel by **Jones & Laughlin Steel Corp.,** Room 553, 311 Ross St., Pittsburgh 30, Pa.

For more details circle NED-2934 on enclosed inquiry slip

VINYL RESIN METAL PRIMER for water-immersion service

This vinyl resin metal primer serves two functions: it acts to inhibit corrosion prior to finish coating and improves bonding of appropriate surfacing material applied over it. It is recommended for industrial and railroad applications where in combination with Apexior No. 3 it can be used for service in water storage tanks, condensers, locomotive tenders and wherever metal is exposed to fresh or salt water at temperatures to 140° F. Primer can be applied by brush or spray to any type of clean metal, and 1 gal protects from 800 to 1000 sq ft of surface. Applied film dries in less than ½-hour; and if final surfacing is delayed, film is highly resistant to variable atmospheric conditions. Made by **Dampney Co. of America,** 1244 River St., Hyde Park, Boston 36, Mass.

For more details circle NED-2935 on enclosed inquiry slip

Pasteurizer

Heat control problem that defeated other thermostats
solved by Thermoswitch* unit

THE WATERS-CONLEY HOME PASTEURIZER, above, required a thermostat that combined low cost with reliable temperature control and ruggedness.

Ordinary thermostats could not meet these conditions. It took the Fenwal Appliance THERMOSWITCH* control to solve the problem.

This thermostat maintains the constant temperature needed for proper pasteurization of milk. But it is surprisingly low priced.

The Fenwal THERMOSWITCH* control is unique in that its activating element is a single-metal, temperature-sensitive case that expands or contracts with temperature changes, making or breaking the electric contacts enclosed within it.

You, too, can benefit from the Appliance THERMOSWITCH* control. Write for further details.

FENWAL INCORPORATED
84 Pleasant Street, Ashland, Mass.
Temperature Control Engineers

Fenwal
APPLIANCE-TYPE
THERMOSWITCH*
*Reg. U. S. Patent Office
SENSITIVE . . . *but only to heat*

For more details circle NED-2936 on enclosed inquiry slip

IT'S EASY TO CUT COSTS in that area of intense activity which comprises a horizontal band 2 feet to 3½ feet above the industrial floor.

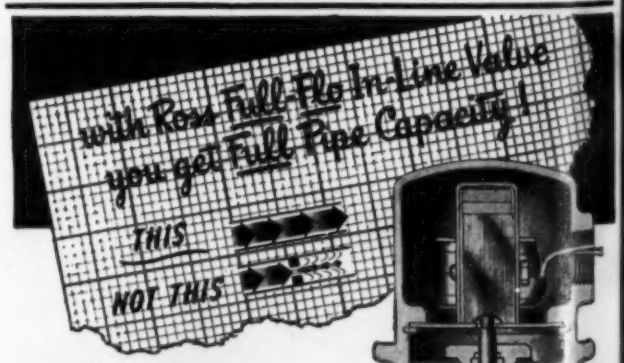
JUST WATCH WHAT GOES ON HERE! You will discover heavy loads being moved, elevated, lowered, and held; stock fed into shears and presses; dies and fixtures placed and removed; assemblies and repairs made.

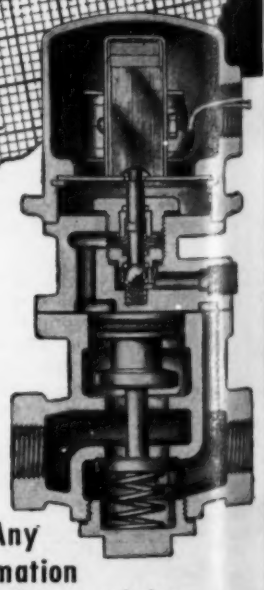
THEN TAKE A LOOK AT PORTELVATOR,© the Handy Hamilton Portable Elevating Table, which is height adjustable within this vital area, and rolls smoothly under 1,000 to 5,000 pound loads on anti-friction casters and wheels. Three standard table models, and hundreds of special models now perform regular, out-size, and unusual jobs in the country's most progressive plants. Our Bulletin P-50 gives specifications and points out uses.

IT'S FREE. WRITE FOR IT!

THE Hamilton TOOL COMPANY
901 HANOVER STREET • HAMILTON • OHIO • U • S • A

For more details circle NED-2937 on enclosed inquiry slip





- Full Line Capacity
- Positive Seal
- High Speed Operation
- Low First Cost
- Low Operating Cost
- Low Maintenance Cost
- Over 500 Straightway and 3-Way Models in ¼"—1¼" Sizes

Ask Ross for Any Air Control Information

Ross makes valves only—hundreds of types and sizes. Take advantage of our quarter century of experience and concentration on control and application of air power!

ROSS OPERATING VALVE CO.
120 S. GOLDEN GATE AVE., DETROIT 3, MICHIGAN

For more details circle NED-2938 on enclosed inquiry slip

DEMING Offers A Wide Selection in

SUMP PUMPS

Deming Vertical Sump Pumps are available in capacities from 10 to 3200 gallons per minute for respective heads up to 120 feet and speeds from 860 to 1750 R.P.M. for motor drive.

Deming Sump Pumps can be installed in any type of wet or dry pit. Impellers are adjustable for capacity, head and wear and fitted to tapered shaft with key and nut. Full weight column with precision thread. Double length bottom shaft bearing with large grease chamber. Write for BULLETIN 4607 for complete details.

THE DEMING CO. • 520 BROADWAY • SALEM, OHIO

Deming Pumps

▲ For more details circle NED-2939 on enclosed inquiry slip ▲

Here's Another Motor that Won't Burn Out...

KLIXON PROTECTORS Prevent Motor Burnouts, Reduce Repairs and Replacements

Burnout . . . not the motor illustrated because the motor manufacturer has included inherent overheat protection by building-in a Klixon Protector.

Out of sight and out of mind, the Klixon Protector keeps constant guard . . . always ready to shut the power "off" should the motor become dangerously overheated. When it cools to a safe operating temperature it snaps the power "on" again automatically.

Motor manufacturer after manufacturer extend the life line of their motors by including Klixon Protectors . . . automatic reset types that recycle automatically . . . manual reset types that require the "red button" to be pushed to reclose the circuit.

SPENCER THERMOSTAT
Division of Metals & Controls Corp.
1904 FOREST ST., ATTLEBORO, MASS.

KLIXON

▲ For more details circle NED-2940 on enclosed inquiry slip ▲

CASE HISTORIES

Show how AUTOMATIC Electric TRUCKS Cut Handling Costs in HALF!

ELECTRIC APPLIANCES
Unloading Radio Cabinets

OLD METHOD

Cabinets unloaded from car and moved by hand truck
To unload one car
25 MAN-HOURS
LABOR COST per car $32.75

NEW METHOD

MEN with AUTOMATIC SKYLIFTS
MAN-HOURS
To unload one car
SAVED PER CAR
19 MAN-HOURS
LABOR COST Saved per car $24.89
50 CARS Man-Hours Saved 4,750
50 CARS HANDLING COSTS SAVED $6,222.50

METAL PRODUCTS
Handling Tinplate

OLD METHOD

Moving heavy tinplate in bundles weighing 2,800 pounds each from freight car to storage by hand truck
To unload one freight car
9 MEN 3 hours 27 MAN-HOURS

NEW METHOD

MEN with 3 TRANSPORTERS
To unload one freight car
MEN 1 HOUR 3 MAN-HOURS
SAVINGS PER CAR 24 MAN-HOURS
LABOR COSTS SAVED PER CAR
Man-Hours X $1.00 per hour
$24.00

FREES 6 additional men available for more productive work

Why don't YOU save this kind of money?

Read these case histories. They are typical of many in our files. YOU can save that kind of money too, no matter what your product.

Whether it's the Transporter, that lifts and moves tons of your material with easy finger-tip control, or the Transtacker or Automatic Skylift Electric Trucks that *stack* as well as lift and move material, these brawny electric trucks save you costly man-hours, pay for themselves in as little as months.

Daily battery charging cost amounts to pennies, not dollars—maintenance cost, low. Get FREE CATALOG *"How to Make Your Material Handling Pay Dividends"* with more case histories of savings in companies like your own. Write today, to:

Trade Automatic Mark
61 West 87th Street
Dept. D-5 Chicago 20, Illinois

Trade Automatic Mark ELECTRIC TRUCKS Lighten LIFE'S LOADS

▲ For more details circle NED-2941 on enclosed inquiry slip ▲

New Processes & Materials

MULTIPURPOSE LACQUER is applied by spraying or dipping

This multipurpose base C-5015 lacquer can be used to finish effectively all types of wood and metal products. Among its recommended uses are lamp, toy, silver and jewelry applications. Of particular interest to furniture manufacturers is fact that it is highly resistant to alcohol on aging and gives high gloss, hardness and resistance to abuse. It can be obtained clear or in colors having full gloss, semigloss or flat finish. Special TO-939 thinner base has been formulated to reduce this lacquer and provide fine flow. Made by **United Lacquer Mfg. Corp.**, 1005 W. Elizabeth Ave., Linden, N. J.

▲ For more details circle NED-2942 on enclosed inquiry slip ▲

HYDROPHOBIC STARCH floats on water without clumping

Free-flowing to extent that it behaves like a liquid, Dry-Flo corn starch derivative is finely divided powder with silky texture that resists wetting by water. Because each starch granule is united with water-repelling hydrocarbon radicals, product cannot be gelatinized by heating in water. If added to water-immiscible solvents, it will remain wetted by solvent even after agitation in presence of water. When moistened with alcohol or other water-miscible solvents or when wetting agents are used, material can be wetted and gelatinized by heating. Dried films of cooked product possess moderate water resistance. Commercial applications include rubber dusting and detackifying, and preventing viscous materials sticking to container walls. Made by **National Starch Products, Inc.**, 270 Madison Ave., New York 16, N. Y.

▲ For more details circle NED-2943 on enclosed inquiry slip ▲

FLOWABLE RUBBER depolymerized type has uniform base

Consisting of all natural crude rubber solids, flowable DPR depolymerized rubber does not contain any solvent. Applications for this material include its use in adhesive formulations, conductive rubbers, plasticizers for crude rubber and synthetics and rubberizing resins. Material is available in range of closely controlled viscosities from free-flowing thin consistency of about 19,000 centipoises at 150° F to slowly flowable heavy viscosity of well over 100,000 centipoises. Made by **H. V. Hardman Co.**, 571 Cortlandt St., Belleville 9, N. J.

▲ For more details circle NED-2944 on enclosed inquiry slip ▲

CHEMICAL RESISTANT FABRIC for lightweight protective clothing

Combining protective features with worker comfort and durability, Gra-Lite fabric provides resistance to wide range of chemical hazards. With Gra-Lite compound it is possible to seal over garment seams and prevent chemical seepage. Clothing made of this material is light in weight, is extremely flexible even under freezing temperatures and will not bind or cling. Complete impregnation of fabric provides chemical resistance on inner surfaces of material. It is abrasion resistant, withstands harsh cleaning agents and will not mildew or rot. Made by **Standard Safety Equipment Co.**, Dept. N, 232 W. Ontario St., Chicago 10, Ill.

▲ For more details circle NED-2945 on enclosed inquiry slip ▲

POLYSTYRENE COATING prevents attraction of dust

Applied by dipping, liquid Logo Stat material can be used on polystyrene immediately after molding to prevent dust accumulation during handling. It does not interfere with normal subsequent painting operations when using pigmented Logoquant paint. Material dries rapidly and is not water soluble following application, although it can be removed by soap and water when desired. Treatment is effective for indefinite period and is unnoticeable on plastic. Samples are available to potential users. Made by **Bee Chemical Co.**, 13799 South Ave. O., Chicago 33, Ill.

▲ For more details circle NED-2946 on enclosed inquiry slip ▲

Widely Used in Industry

To Save . . .
✓ COPPER
✓ MANPOWER
✓ CONDUIT

JEFFERSON Dry Type POWER CIRCUIT Transformers

Run only high voltage circuits throughout plant or building and use Jefferson Power Circuit Transformers for reducing voltage to conventional 115/230 Volts single phase at usage points.

Save conduit, copper and manpower. Use this system in new buildings or in old plants where power increases require larger lines to carry the load. Standard double-wound Jefferson Power Circuit Transformers are made in capacities from 50 to 15000 V.A. inclusive; 460/230 volt primary, 230/115 volt secondary; or 575 volt primary, 230/115 volt secondary. Furnished with brackets for wall mounting and wiring compartment with knockouts for BX or conduit. Approved by Underwriters' Laboratories.

Write for Bulletin 501-15

JEFFERSON ELECTRIC COMPANY
Bellwood, Illinois

In Canada: Canadian Jefferson Electric Co., Ltd., 384 Pape Ave., Toronto, Ont.

▲ For more details circle NED-2947 on enclosed inquiry slip ▲

IN WIRE-MESH PRODUCTS LET JELLIFF DO IT!

For 70 years we've been weaving Wire Mesh. And a good part of that time we have also been making things of Wire Mesh for people who find it is cheaper, easier and generally more satisfactory to "let Jelliff do it."

From big Dipping Baskets to tiny precision filters — from fuel strainers to what-is-it gadgets — JELLIFF's Custom Production Department turns out fabricated Wire-Mesh products at speed, price and precision that mean lower costs and a stronger competitive position for our many customers.

If you buy or make wire-mesh assemblies as components of your own products and have not yet had an estimate from Jelliff, write today for details. No obligation, even if you enclose a blueprint for us to figure on. Address Department 11.

THE C. O. JELLIFF MFG. CORP.
DIPPING BASKETS
LEKTROMESH
RESISTANCE WIRE
WIRE MESH PARTS
WIRE CLOTH
STRAINERS • FILTERS
SOUTHPORT CONNECTICUT
WIRE PRODUCTS SINCE 1860

▲ For more details circle NED-2948 on enclosed inquiry slip ▲

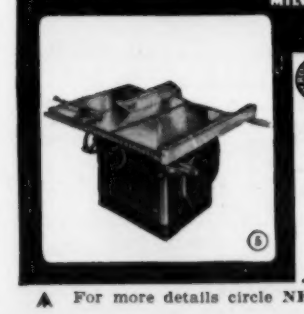
DELTA®
—the complete, quality line
—gives you the right machines to cut time and costs for maintenance jobs

• Send coupon for facts on every Delta machine!

Tear out coupon and mail today!

① 17" Drill Press
② 14" Band Saw
③ 6" Jointer
④ Tool Grinder
⑤ 12" Tilting-Arbor Saw

DELTA MILWAUKEE

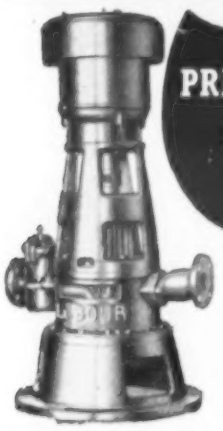


Power Tool Division
ROCKWELL MANUFACTURING CO.
616D E. Vienna Ave., Milwaukee 1, Wis.

Send me free catalogs and bulletins on the complete Delta line.

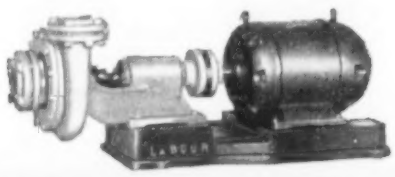
Name_____
Title_____
Company_____
Address_____
City_____ (___) State_____
WM-38

▲ For more details circle NED-2949 on enclosed inquiry slip ▲



PRIMING and NON-PRIMING
CENTRIFUGAL ACID PUMPS

Capacities 10 G.P.M. and up. Materials available to resist corrosion by nearly all acids and caustics. Handle air or vapor with liquid when necessary, also small solids in suspension. Simple, dependable. Write for details, stating your problem: kind of liquid, temperatures, capacity, pressure and suction lift.



THE LABOUR COMPANY, Inc.
1573 Sterling Avenue Elkhart, Indiana, U. S. A.

For more details circle NED-2950 on enclosed inquiry slip

8 ways better than old-fashioned friction tape

New Polyken No. 163 ELECTRICAL TAPE

Exceeds A.S.T.M. Friction Tape specifications these eight ways: 1. Thinner, but just as strong. 2. Higher dielectric strength. 3. Better moisture barrier. 4. Sticks quicker (higher "tack"). 5. Cleaner—doesn't collect grime. 6. Unwinds easily. 7. Doesn't fray. 8. Sticks firmly to any clean surface.

Costs no more than the friction tape you're probably using. Ask your POLYKEN distributor about No. 163 today, or write for free folder "Test It Yourself!" Address POLYKEN, Dept. 10-4, 222 W. Adams St., Chicago 6.

Another FIRST ... by

Polyken® INDUSTRIAL TAPE
DEPARTMENT OF BAUER & BLACK
DIVISION OF THE KENDALL COMPANY
222 W. ADAMS ST., CHICAGO 6

For more details circle NED-2951 on enclosed inquiry slip

Looking for NEW WAYS to CUT COSTS?

IF YOU HAVE PROBLEMS on machining, forging, casting, welding, heat treating, materials handling, metal cleaning and finishing, or other production processes, you can get a lot of helpful information in the magazine STEEL.

STEEL will also give you plenty of ideas on how to save money through the proper selection and buying of steel and other materials.

In fact, STEEL gives you 3 complete services in one: (1) A reliable market guide (2) An engineering and operating paper (3) A dependable news source. But don't take our word for it. Try STEEL for the next 26 weeks at a very special introductory rate. Use the coupon today! Get your service started with the next issue!

STEEL, 834 Penton Building, Cleveland 13, Ohio
Send me STEEL's regular weekly service for the next 6 months (26 weeks) at the Special Introductory Rate of only $5.00. Include a complimentary copy of the 450-page 1950 METALWORKING YEARBOOK.

Name _____ Title _____
Company Address _____
City _____ Zone _____ State _____

For more details circle NED-2952 on enclosed inquiry slip

New Processes & Materials

METAL FORMING PROCESS forms compound curvatures and deep drawn flanges without distortion

Parts ranging from 0.010-in. aluminum to 0.109-in. deep-drawing steel can be formed into wide variety of shapes and sizes, as illustrated, by means of Marform process. Complex sheet metal parts involving drawing, shrinking and stretching are produced at rate of 50 to 120 per hour with less than 5 per cent variation in material thickness. In addition to simple draw operations, process can be utilized to form and trim flanged aluminum parts of certain gages without using wrinkles or flutes to absorb excess metal. Any desired pressure pattern can be attained and geared to shape of part to be formed. Dimensional tolerances within 0.002-in. can be held. Several different parts with complicated contours, each having similar pressure curves, can be formed simultaneously.

Principal feature of process is precision control of pressure curve for forming cycle which enables part to be formed free of wrinkles and reduces springback to minimum. Rubber is employed as female portion of tool, and cushioning effect prevents rapid application of strain at any point of metal. Lateral pressure is also exerted to lock metal already formed to form block of tool. Process developed by **Glenn L. Martin Co.**, Dept. 180-KE, Baltimore 3, Md.; metal forming units manufactured by **Hydropress, Inc.**, 570 Lexington Ave., New York 22, N. Y.

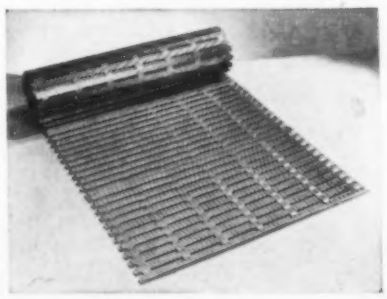
For more details circle NED-2953 on enclosed inquiry slip

SILICONE MOLDING COMPOUND possesses high heat resistance

This G-E 12810 silicone glass molding compound is suitable for use in circuit breakers, switchgear and other parts where resistance to extreme heat and impact is necessary. It consists of silicone resin and glass fiber filler and will withstand continuous operation at 392° F. Compound also has excellent arc resistance, good flow in mold, will not support combustion and has no toxicity when burned. Made by **General Electric Co.**, Plastics Dept., 1 Plastics Ave., Pittsfield, Mass.

For more details circle NED-2954 on enclosed inquiry slip

FLOOR MATTING can be cut easily to accurate fit



Designed especially for use as runner mat, Traffic-Tred matting can be fitted readily into recesses. It has good dirt scrapeage qualities, attractive surface design, and ample aeration and drainage. Measuring ⅜-in. thick, it is obtainable in closed, open or open-on-end-of-slots-only constructions. Made by **American Mat Corp.**, 1733 Adams St., Toledo 2, O.

For more details circle NED-2955 on enclosed inquiry slip

PROTECTIVE MASONRY COATING makes walls impervious to water

Improved No. V transparent coating containing polysiloxane resin can be used to render outside above grade masonry walls impervious to water, rains and dampness. It is priced at $5.50 per gal in 1 and 5-gal cans and at $5.25 in 55-gal steel drums. Made by **Ranetite Mfg. Co.**, 1917 S. Broadway, St. Louis 4, Mo.

For more details circle NED-2956 on enclosed inquiry slip

HAND CLEANER compound functions without water

Recommended for removing paint, inks, graphite, asphalt, tar, oil and grease, Safe hand cleaner is scientifically prepared compound that contains vegetable oils and lanolin. When small quantity is rubbed on hands, it liquefies without use of water and can be wiped off with dry cloth or paper. It can be obtained in 2¾-oz tubes and 14-oz, 5 and 10-lb cans. Made by **Fairfax Chemical Co.**, 4505 Olive St., St. Louis 8, Mo.

For more details circle NED-2957 on enclosed inquiry slip

IT'S TIME TO INVESTIGATE if you are not using the PROVEN Dy-Namic Balancing technique in your plant! Improves product performance by reducing noise, vibration and friction —*fast...accurate...economically!* FREE Dy-Namic Balancing Manual brings you latest facts! Bear Mfg. Co., Dept. NS, Rock Island, Ill.

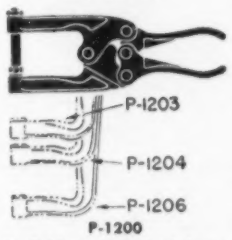
"BEAR" STATIC AND DY-NAMIC BALANCING MACHINES

For more details circle NED-2958 on enclosed inquiry slip

For Quick, Efficient On-Location Clamping Use Knu-Vise Portable Vises

P-400
For clamping when space is limited
Equipped with various spindle types—steel or copper, or rubber capped

FGP-400
Spindle automatically adjusts itself to total thickness of materials held



P-1200
Available in 4 standard throat gaps—1½", 2¼", 3½" and 6"

Whether you clamp tiny parts requiring pressures of a few pounds or want to hold together huge assemblies that need pressures of around 1800 pounds, Knu-Vise Toggle-action pliers will provide the dependable service you need.

Made to most exacting specifications resulting from exhaustive laboratory tests and years of practical use among leading industries.

SPECIAL MODELS ON REQUEST
Ask for complete catalog
Consult us direct or our representative engineer near you

Buffalo, N. Y., J. H. England
Chicago 20, Ill., Larry P. Wood
Columbus, Ohio, Arthur Gangloff
Dallas, Texas, C. G. Wilson Co.
Dayton, 2, Ohio, W. F. Grimes
Glendale, Calif., Art Lewis Prod. Equip. Co.
Houston, Texas, L. H. Creasy
Indianapolis, Indiana, E. M. Lewis
Kansas City, Kansas, L. N. Wood
Milwaukee 9, Wisconsin, K. W. Stoffregen
New York 17, New York, V. A. Chern
Oakland, Calif., Bues Prod. Equip. Co.
Philadelphia, Penn., Jackson - Walter Company
Seattle, Washington, Norwes Company
St. Louis, Missouri, Moehlenpah Engr. Inc.
Warren, Ohio, P. L. Duer

KNU-VISE PRODUCTS LAPEER MFG. CO.
3056 DAVISON ROAD • LAPEER, MICHIGAN
Western Division, 422 Magnolia St., Glendale, California

For more details circle NED-2959 on enclosed inquiry slip

SPACE-SAVING CYLINDERS

PACK POWER IN MINIMUM AREA

1½ to 8" bores available for prompt delivery

O-M hydraulic, water, air cylinders save up to ⅓ in space required. Unique circumferential key locks honed steel tubing to compact end caps . . . yet disassembly is a matter of seconds. Ports oriented radially in infinite number of positions. All mounting brackets available. Steel (no castings) and bearing bronze throughout. *Write today for specifications.*

ORTMAN-MILLER MACHINE CO., INC.
1222-4 150th Street, Hammond, Indiana

For more details circle NED-2960 on enclosed inquiry slip

GRC's SMALLNESS UNLIMITED

. . . THE BIGGEST THING IN TINY ZINC DIE CASTINGS

If your product or design calls for a *really small* part—call Gries, as so many cost-minded manufacturers do. Quickly and at amazing low prices, GRC's exclusive production facilities turn out simple or intricate parts in one automatic operation—*completely trimmed, ready for use.* 100,000 pieces to many millions. New design possibilities, new products and substantial savings in many instances are now possible. See what GRC's *smallness unlimited* can mean for you.

Write Today for Bulletin and Samples

GRIES REPRODUCER CORP.
82 Willow Ave. New York 54, N.Y.

Maximum Wt: ½ oz. Maximum Lgth: 2 in. NO MINIMUM

For more details circle NED-2961 on enclosed inquiry slip

Pays for itself in 5 months

● This shop was using universal electric grinders for grinding welds. Switch to Rotor Air Grinders gave these results:

Cuts grinding time in half due to greater cutting power . . . higher speed under load.

Savings pay for tools in 5 months due to reduced man-hours for grinding. An annual return of 240% on investment.

Improves working conditions because Rotor air tools are lighter in weight and run cool even on hot summer days.

Write for free booklet, "How to Choose and Use Portable Tools."

AIR O'TOOL

THE ROTOR TOOL CO. HIGH CYCLE
CLEVELAND, OHIO
UNBIASED ANALYSIS OF PORTABLE TOOL PROBLEMS

For more details circle NED-2962 on enclosed inquiry slip

New removable stickers

Faster to apply...easy to remove!

The remarkable, new "active adhesive" of *Kum-Kleen* pressure-sensitive Labels seals them to the most difficult-to-label surfaces without heat or moistening...labels never curl or pop, even in temperature and humidity extremes. Because they're peelable, they may be placed on parts and equipment in the exact spot they should go. Will not mar the surface or leave a trace.

Kum-Kleen labeling pays its own way! Many users say the time and money savings of *Kum-Kleen* dispensing methods pay cost of labels!

Kum-Kleen

ADDRESS: DEPT. NED-4
AVERY ADHESIVE LABEL CORP.
MONROVIA, CALIFORNIA

For more details circle NED-2963 on enclosed inquiry slip

New Processes & Materials

PIPE DRIP PREVENTIVE consists of insulation and seal

Moisture and sweating found where exposed water pipes carry cold water through warmer air can be eliminated by No-Sweat condensation preventive. Fire and vermin-proof Fiberglas insulation is wrapped around pipe, usually in sections covering 4 to 5 ft at a time. This insulation is then covered with semielastic fiber tape containing vapor seal. Tape prevents outside moisture from coming in contact with pipe and retains air trapped in insulation. Material is supplied in 40-ft roll lengths. Made by **Associated Specialties Co.,** 10680 Gratiot Ave., Detroit 13, Mich.

For more details circle NED-2964 on enclosed inquiry slip

BLAST CLEANING ABRASIVE is nonmetallic and silica-free

Developed for blast cleaning and finishing operations, Black Beauty sharp fast-cutting abrasive retains its abrading qualities even when reduced to very fine material. Although it has much the same properties as sand, there is no free silica to create occupational hazard. It wears longer than sand and is less damaging to equipment. It is noncorrosive and stainless; flows freely and does not rust, pack or harden. Variety of sizes graded for any type of work or finish desired is obtainable from stock. Made by **American Wheelabrator & Equipment Corp.,** 508 S. Byrkit St., Mishawaka, Ind.

For more details circle NED-2965 on enclosed inquiry slip

FLEXIBLE STAINLESS HOSE available in full range of sizes

Usable for conveying corrosive or searching liquids and gases where motion is required, this corrosion-resistant flexible stainless steel hose can withstand high temperatures and pressures. Open or closed corrugation pitch types are offered to meet varying requirements of flexation, cycles of vibration and variplane motions.

Fabricated in sizes from $\frac{5}{16}$ to 6-in. ID in single or multiple ply construction, hose is available for working pressures to 2000 psi. Wall thicknesses range from 0.003-in. in single ply to 0.03-in. in multiple ply construction. Hose is supplied with helical or annular corrugations and with or without braid covering, depending upon pressure and other factors of service use. Made by **Chicago Metal Hose Corp.,** 1343 S. Third Ave., Maywood, Ill.

For more details circle NED-2966 on enclosed inquiry slip

PLASTIC ROD & TUBING available for machining purposes

Suitable for numerous high frequency insulation applications in electrical and electronic fields, Du Pont Teflon polytetrafluoroethylene plastic can now be supplied in form of rod and tubing. Because of its almost complete inertness, high temperature resistance and nonsticking qualities, it is suitable for use in many processing industries. Made by **Polymer Corp.,** Ganster Bldg., Reading, Pa.

For more details circle NED-2967 on enclosed inquiry slip

PLASTIC COATINGS resist abrasion and corrosion

Applicable to wood or metal by brush, spray or dipping, Calvinac vinyl plastic coatings are air-drying, nontoxic and highly dielectrical. They are resistant to alcohol, acids, salts, alkalies and fumes and are particularly effective in protecting petroleum equipment. Coatings are proof against cleaning mixtures, withstand sterilization by steam and will not oxidize. Primer adheres well to magnesium, aluminum and other metals; and Calvoseal coating for concrete, masonry, textured and plain wallboards, asbestos shingles, plaster and similar materials is impervious to moisture penetration. Coatings are available in selection of standard colors and in 1-pt, 1-qt, 1-gal, 5-gal and 50-gal containers. Made by **James Lithgow Co.,** Dept. 15, 4663 Sheila St., Los Angeles 22, Calif.

For more details circle NED-2968 on enclosed inquiry slip

FLEXLOC

ONE-PIECE SELF-LOCKING NUTS

The FLEXLOC is one-piece, all-metal . . . has ample tensile and long life. It is a Stop and Lock-Nut that can be reused many times. Its "chuck-like", resilient locking segments lock the FLEXLOC securely in any position on a threaded member. It positively "won't shake loose", yet can be removed easily with a wrench.

Write for Catalog 619, it's full of Information.

See us at Space 128, A.S.T.E. Exposition, April 10-14, Convention Hall, Phila.

SPS STANDARD PRESSED STEEL CO.
JENKINTOWN 24, PENNSYLVANIA

For more details circle NED-2969 on enclosed inquiry slip

SAVE as much as 15% in welding time and gas . . .

REDIFLUXED BRONZE welding rod

Does away with hand-fluxing when brazing iron and steel or welding bronze and brass

YOU can't beat this high-quality flux-coated, low-fuming manganese-bronze rod for best results—and savings in labor and gas used. No stopping to apply flux by hand. Jobs are done faster.

The coating provides automatic accurate control of flux. This insures correct bonding—gives dense, ductile deposits with high tensile strength, ideal for machining and threading. Ideal for wearing surfaces, too, because of the toughness and resiliency of the deposited metal.

REDIFLUXED BRONZE is free-flowing, with a low melting point of 1625° F. and a flow point of 1680° F. Less heat is required—more gas saved.

Recommended for brazing steel, cast iron and malleable iron; for welding brass and bronze. Sold in rods ⅛", 3/16" and ¼" in diameter, 36" long, packed in tubes containing 10 lbs. . . . Switch to REDIFLUXED BRONZE today, backed by NCG.

Write for Illustrated Folder

NATIONAL CYLINDER GAS COMPANY
846 North Michigan Avenue Chicago 11, Illinois

NCG
EVERYTHING FOR WELDING

Copr. 1950, National Cylinder Gas Co.

For more details circle NED-2970 on enclosed inquiry slip

LYON-Raymond
HYDRAULIC
Pallet Lift Trucks

Furnished in Several Models to Fit Your Needs

1. **Streamlined Lightweight Models:** For fast handling and maneuvering the lighter pallet loads.
2. **Heavy Duty Models:** For pallet loads up to 4,000 lbs. — Also 6,000 lb. capacities.
3. **Electric Tiering Models:** New — Different — The Shortest — The Lightest — The Most Maneuverable of any powered Pallet Tiering Truck.

Write for literature on the models in which you are interested.

LYON-Raymond
CORPORATION
Electric Power Trucks . . . Skid and Pallet Lifts
Hydraulic Elevating Equipment
Positioning . . . Sheet and Die Handling

4127 Madison St.
GREENE, N.Y.

▲ For more details circle NED-2972 on enclosed inquiry slip ▲

gives you . . .

- **Better Paint Jobs**
- **Better Electroplating**
- **Better Finishing**
- **Better Products**

Slash finishing costs to rock-bottom in your plant! Amazing Pangborn Hydro-Finish cleans far faster than hand methods, yet holds tolerances to .0001"! Hydro-Finish cannot harm your product's sharp edges or corners, forms a perfect "tooth" for non-peel electroplating, finishing or painting.

Hydro-Finish makes threaded pieces turn easily . . . forms millions of little "oil pockets" in lubricated pieces to prolong product life. Fatigue failure is reduced because Hydro-Finish removes or blends grinding lines, etc!

Hydro-Finish is also valuable in your tool room—cleans production tools and dies in a fraction of the time needed for expensive hand cleaning.

WRITE TODAY for Bulletin 1400. Contains full facts on Pangborn Hydro-Finish and Pangbornite Abrasive. For your free copy, address: PANGBORN CORPORATION, 1294 Pangborn Blvd., Hagerstown, Maryland.

Pangborn

BLAST CLEANS CHEAPER with the right equipment for every job

▲ For more details circle NED-2973 on enclosed inquiry slip ▲

New Literature and Catalogs

Flow Meter Engineering

Illustrated 416-page handbook "Principles and Practice of Flow Meter Engineering" by L. P. Spink is enlarged edition of this standard text. Complete, up-to-date information is presented on all phases of flow engineering. New additions to book include equations and curves for calculating throttling orifices to be used at critical pressure drops, complete section on measurements of fluid flow in metric units, table of corrections for barometric pressures and table of pressure multipliers up to 5000 psig. Price is $7. Issued by Foxboro Co., 134 Neponset Ave., Foxboro, Mass.

▲ For more details circle NED-2974 on enclosed inquiry slip ▲

Toilet Compartments

Sanymetal Products Co.—20-page illustrated catalog No. 87 contains color chart and chips showing wide variety of colors, shades and tints available in toilet compartments. Overhead braced, ceiling hung, floor supported, standard flush and standard panel types of compartments are described in detail.

▲ For more details circle NED-2975 on enclosed inquiry slip ▲

Colored Rubber

Stalwart Rubber Co.—"Your Color In Rubber" reveals company's ability to duplicate any color in rubber, regardless of shade or tone, without altering desirable characteristics of particular rubber stock for specific application. Applications suggested in this 4-page illustrated catalog include parts for toilet seats, thermos jugs, shower hose, vacuum cleaner accessories and kitchen appliances.

▲ For more details circle NED-2976 on enclosed inquiry slip ▲

Bearing Care

Anti-Friction Bearing Distributors' Association—20-page illustrated booklet entitled "Installation, Maintenance, Removal of Anti-Friction Bearings" is handy guide to correct shop procedure that can increase bearing efficiency and eliminate many bearing failures. Information is given on bearing types, cleaning, removing, installation, lubrication and how to handle and prepare bearings for storage.

▲ For more details circle NED-2977 on enclosed inquiry slip ▲

Rotary Feed Table

Bellows Co.—8-page illustrated bulletin T-25 gives detailed information on how both mechanically operated and electrically operated rotary feed tables can be used for fast feeding of work pieces to machine tools in order to lower production costs.

▲ For more details circle NED-2978 on enclosed inquiry slip ▲

Sectional Conveyor

Hewitt-Robins Inc., Robins Conveyors Div.—Sectional conveyor that can be assembled in field is discussed in 4-page bulletin No. 132. It consists of drive section, tail section and any desired number of intermediate truss sections to form conveyor of any length up to limitations of belt.

▲ For more details circle NED-2979 on enclosed inquiry slip ▲

Finishes & Coatings

Gates Engineering Co.—Many industrial and marine applications of vinyl finishes and coatings are described in this 4-page illustrated brochure. These coatings can be applied quickly and are long lasting, chemically inert and nontoxic.

▲ For more details circle NED-2980 on enclosed inquiry slip ▲

Rivet Roller Chain

Chain Belt Co., Baldwin-Duckworth Div.—8-page illustrated bulletin No. 50-6 covers Baldwin-Rex BA riveted chain assembly which consists of standard riveted roller chain with special single pin connector link. Connector is assembled at 2-ft mark and at end of each basic 5-ft length.

▲ For more details circle NED-2981 on enclosed inquiry slip ▲

Milling Cutters

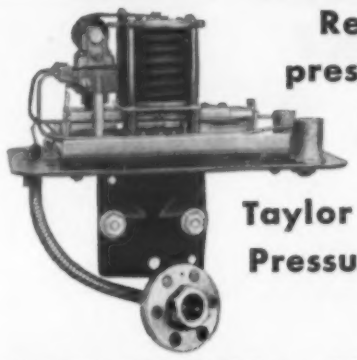
McCrosky Tool Corp.—36-page illustrated bulletin No. 17-M on Jack-Lock milling cutters explains construction and use of these tools which have carbide-tipped, cast alloy or high speed steel blades. Described are shank and shell end, face, half side and staggered tooth mills for cutting cast iron, aluminum and steel.

▲ For more details circle NED-2982 on enclosed inquiry slip ▲

Welding Electrodes

Hobart Brothers Co.—16-page illustrated electrode selection guide No. EW-149 lists identifications, procedures, recommended currents and physical properties of electrodes for welding mild steel, cast iron, aluminum, bronzes and other materials; for hard surfacing; and for building up.

▲ For more details circle NED-2983 on enclosed inquiry slip ▲



Read changing pressures instantly 1000 ft. away with new Taylor "TRANSAIRE*" Pressure Transmitter

*Trade-Mark

New Taylor TRANSAIRE Pressure Transmitter with narrow range spans lets you measure and transmit minute pressure changes up to 1000 feet with instant accuracy! Works on simple force-balance principle. Gives you accuracy of ½% of range span (**conventional devices are only accurate up to ½% of upper range limit**). Here's accuracy and sensitivity never before possible in pressure measurement—plus the convenience of suppressed ranges at high pressure levels.

7 IMPORTANT ADVANTAGES:

1. Range spans of 20 to 40 psi available throughout range limits of 35 to 415 psia.
2. Volumetric type pressure system is extremely accurate, practically clog-proof, has corrosion-resistant 316 stainless steel diaphragm.
3. Temperature and barometric compensation for higher accuracy.
4. Perfect for many jobs, especially thin fractionating columns.
5. No individual calibration of receivers or controller—thanks to standardized 3 to 15 psi output air pressure.
6. Simple screwdriver adjustment for shifting the operating range.
7. Interchangeable manifold assemblies make 20 and 40 psi range spans optional.

This Taylor TRANSAIRE Pressure Transmitter is another step in Taylor's program to produce industrial instrumentation unsurpassed in **accuracy, simplicity, and durability.** We're doing this, of course, to help you keep costs down and quality up. Ask your Taylor Field Engineer! Or write for BULLETIN 98098. Taylor Instrument Companies, Rochester, N. Y., and Toronto, Canada. *Instruments for indicating, recording and controlling temperature, pressure, humidity, flow and liquid level.*

TAYLOR INSTRUMENTS MEAN "ACCURACY FIRST"

▲ For more details circle NED-2984 on enclosed inquiry slip ▲

FOR YOUR DIRECT POWER DRIVE APPLICATIONS

Whitney Roller Chain Flexible Couplings offer the equipment manufacturer and machine user a practical and efficient unit for connecting power equipment to direct drives. All steel construction . . . precision roller chain and hardened cut tooth sprockets provide positive operation . . . assure long life.

Check these Whitney Flexible Coupling features, easily installed, allows for motor end float, disconnects without removing shafts or bearings, allows for slight shaft misalignment.

You can use Whitney Flexible Couplings wherever a positive yet flexible direct drive is required. Write for information.

WHITNEY CHAIN & MFG. CO.
203 Hamilton Street, Hartford 2, Connecticut

▲ For more details circle NED-2985 on enclosed inquiry slip ▲

It's New! Better! Different!

Black Arrow HOLLOW AIR Spray Gun

Perfect Spray Patterns--Faster, Easier, Less Cost!

Production painters call Black Arrow's HOLLOW AIR Spray Gun the most sensational development in the spray gun field. That's because of its patented HOLLOW AIR Atomizer Head which, in terms of spray results, gives you five big advantages.

1. The widest, wettest, most uniformly distributed spray pattern you've ever seen.
2. Complete atomization of paint over the entire pattern.
3. No spotting at edges, no runs, sagging or orange peel.
4. More economical spray because HOLLOW AIR usually requires less pressure.
5. Much softer spray because HOLLOW AIR blends paint and air perfectly.

See your jobber! Write for catalog.

The Secret of* HOLLOW AIR *Atomization

Two hollow cones of air, perfectly delivered in relation to the center paint jet by the patented HOLLOW AIR Atomizer Head, are responsible for HOLLOW AIR's superior results. These cones of air carburize paint evenly, thoroughly—produce symmetrical patterns, uniformly distributed. This enables operators to produce perfect spray patterns, easily, consistently.

BLACK

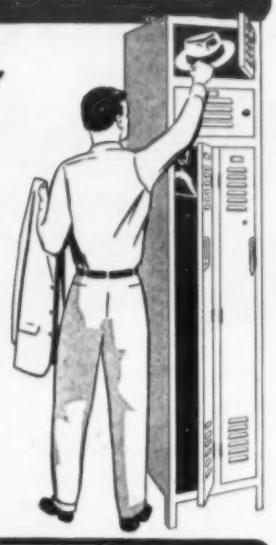
The Black Manufacturing Company
Parkton, Maryland

Beyond Compare—HOLLOW AIR

▲ For more details circle NED-2986 on enclosed inquiry slip ▲

END LOCKER ROOM "EVILS"

THE 1869 Penco WAY



The Penco 2-Person Locker eliminates crowding, discomfort, petty thefts that irk employees. A large, *private* locker for each worker in *half the usual area!* This morale-building space-saver is just one of 50 Penco Lockers. Write for prices, catalog, installation data for your *specific* needs.

Insist on PENCO Quality

PENN METAL Corporation of Penna.
Steel Lockers, Cabinets, Shelving
82 Oregon Ave., Phila. 48, Pa.
FOUNDED 1869 by L. Lewis Sogendorph

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DESIGN FEATURES that mean BETTER HEATING of FLUIDS

WATLOW IMMERSION UNITS

Cylindrical shapes permit low watt density heat dissipation. Seamless-type round sheaths minimize scaling and provide for easy cleaning. Other types in curved flat or round shapes for maximum heating surface. Nickel alloy and stainless steel sheaths for corrosion resistance: ¼"—2" dia., 3½"—60" lengths, 10W-35W densities.

Send for Watlow Production Heating Catalog.

SPECIALISTS IN ELECTRIC HEATING UNITS
WATLOW ELECTRIC MANUFACTURING COMPANY
1314 N. 23d St. St. Louis 6, Mo.

▲ For more details circle NED-2988 on enclosed inquiry slip ▲

When each trolley wheel carries its share of the load in perfect alignment with the craneway tracks and all possible friction is eliminated, the result is perfectly articulated trolley travel.

Applied to American MonoRail Cranes, these articulated trolleys permit operating speeds of 500 feet per minute . . . constant service . . . handling loads up to 10 tons. And with this is offered all the flexibility of MonoRail design for *interlocking carrier service between and beyond the craneways.*

Write for complete information.

THE AMERICAN MONORAIL COMPANY
13116 Athens Avenue • Cleveland 7, Ohio

▲ For more details circle NED-2989 on enclosed inquiry slip ▲

New Literature—Continued

Trucks, Casters & Wheels

Thomas Truck & Caster Co.—64-page illustrated catalog No. 50 describes platform, Jak-Tung, wagon, two-wheel and pry trucks; superstructures; dollies; trailers; casters and industrial wheels. Types are available to meet practically every material handling need.

▲ For more details circle NED-2990 on enclosed inquiry slip ▲

Sprockets & Chain

Cullman Wheel Co.—56-page illustrated buying guide No. 50 presents details, drawings and specifications of all types of sprockets and chain for power transmission applications. It is prepared specifically for engineers, designers and purchasing agents.

▲ For more details circle NED-2991 on enclosed inquiry slip ▲

Electric Heating Elements & Thermostats

Cutler-Hammer, Inc.—Pyroflex heating elements and thermostats for use in electric water heaters are described in 6-page illustrated folder HE-23. Elements feature pressure-type wire connectors, flat Bakelite terminal blocks, Heli-Arc welded terminal plates and water-tight flanges. Clamp-on thermostats respond instantly to water temperature change and are adjustable.

▲ For more details circle NED-2992 on enclosed inquiry slip ▲

Hydraulic Weighing Systems

Baldwin Locomotive Works, Testing Equipment Dept.—20-page illustrated bulletin 303 describes new Baldwin portable hydraulic weighing system components for varied applications in industry and testing. Included are Emery hydraulic cells with capacities from 1000 to 100,000 lb for compression and tension loads, and crane scales and portable cells with integral bourdon type indicators.

▲ For more details circle NED-2993 on enclosed inquiry slip ▲

Triplex Pumps

Aldrich Pump Co.—Full information on new 5-in. stroke triplex direct flow pump is presented in 6-page illustrated data sheet No. 64. Pumps are available with up to 3½-in. plunger diameters and deliver up to 2140 gpm at 675 psi. Maximum pressure of 2700 psi is obtainable with smallest plunger size.

▲ For more details circle NED-2994 on enclosed inquiry slip ▲

Small A-C Motors

Price Electric Co.—Details of shaded-pole fractional-horsepower motors in wide range of ratings are covered in 4-page illustrated bulletin. Dimensions and performance data are given on both two and four-pole motors.

▲ For more details circle NED-2995 on enclosed inquiry slip ▲

Speed Reducers

De Laval Steam Turbine Co.—28-page illustrated bulletin G-W8 offers dimensional, application and design data on IMO-De Laval horizontal worm gear speed reducers which are available in ratios up to 100:1. Sample calculations to guide in selection of proper unit for given load are included.

▲ For more details circle NED-2996 on enclosed inquiry slip ▲

Pipe & Cable Locator

Fisher Research Laboratory Inc.—Two 4-page illustrated bulletins give complete details of Economy and Standard lightweight models of the M-Scope which quickly locates buried pipelines and underground cables. Fully portable and self-contained, this device operates on inductive, conductive and radio balance principles.

▲ For more details circle NED-2997 on enclosed inquiry slip ▲

Safety Equipment

General Scientific Equipment Co.—48-page illustrated catalog "Everything in Safety" carries detailed descriptions of complete line of personal protective equipment and industrial safety devices. Described are respiratory and eye protection aids, hats, gloves, carboy pumps, drum pumps and other safety equipment for use in industries, mines and utilities.

▲ For more details circle NED-2998 on enclosed inquiry slip ▲

Carbides & Cast Alloys

Vascaloy-Ramet Corp.—92-page illustrated catalog VR-440 on carbide and cast alloy products is designed primarily as buying guide. It is suitable also as standard reference on carbide products. Partial list of products covered includes carbide tools, blanks, wire drawing dies, end mills and blades as well as Tantung castings. Details of complete line of tool holders are given.

▲ For more details circle NED-2999 on enclosed inquiry slip ▲

Steel Casting Data

Lebanon Steel Foundry—Two revised steel casting reference charts cover 33 selected grades of carbon and low alloy, stainless, corrosion-resistant and heat-resistant alloys. Incorporated is detailed reference material on specification designations, analyses, physical properties, heat treatment and related data on 18 high and 15 low alloys and carbon steels.

▲ For more details circle NED-3000 on enclosed inquiry slip ▲

ARMSTRONG

Every tool shown represents a full line of quality tools, known the world over as the finest of its type.

Armstrong Tools are stocked by Industrial Distributors.

Write for Catalog

ARMSTRONG BROS. TOOL CO.
"The Tool Holder People"
5245 W. Armstrong Ave., Chicago 30, U. S. A.
New York San Francisco

▲ For more details circle NED-3001 on enclosed inquiry slip ▲

For Safety's Sake Use
DAYTON SAFETY LADDERS

Sizes 3 feet to 16 feet in height with standard rubber safety shoes at no extra cost.

Maintenance men everywhere rely on Dayton Safety Ladders for maximum safety and convenience. Daytons are constructed of tested airplane spruce and reinforced with rigid steel supports to give great strength and lightness of weight.

Handrails of steel guard the large roomy platform for added safety. Half of platform can be raised to form an extra step, when needed. These famous ladders can be set up instantly, are easy to carry and fold compactly for storing. Automatic locking feature insures safety while ladder is in use.

Write today for Bulletin No. 10

DAYTON SAFETY LADDER CO.
2339 GILBERT AVE. CINCINNATI, OHIO
In Canada—Safety Supply Company—Toronto

▲ For more details circle NED-3002 on enclosed inquiry slip ▲

New STAINLESS TUBING *Data File*

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● Complete information on physical properties, special shapes, available sizes, etc. is yours in this Carpenter Stainless Tubing File Folder.

Clip coupon or write a note on your company letterhead for your copy of this useful engineering information.

CLIP COUPON FOR STAINLESS TUBING DATA FILE

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Alloy Tube Division • 118 Springfield Road
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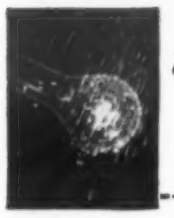
NAME_____ TITLE_____
(Please Print)
COMPANY_____
ADDRESS_____
CITY_____ ZONE_____ STATE_____

▲ For more details circle NED-3003 on enclosed inquiry slip ▲

3 ways you save on lighting costs



1. AMPLEX "WEATHERCOTE" LAMP. Cuts lamp mortality up to 75% where moisture, steam or outdoor weather kill ordinary lamps – costs just a fraction more.

Water test shows "Weathercote" reliability

2. AMPLEX DOUBLE DUTY LAMP. Perfect for high bay and other hard to reach locations. A money-saving, extra-service, longer life lamp that cuts replacements almost in half.

3. AMPLEX REFLECTOR LAMP. Delivers more light on the work area. Its pure-silver-lined sealed beam reflector maintains maximum brilliancy for the life of the lamp.

Write for catalog and sample lamps to Amplex Corporation, Dept.34, 113 Water Street, Brooklyn 1, N. Y.

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INDUSTRIAL INFRA-RED HEAT LAMPS • STREET LAMPS • FLUORESCENT LAMPS
ROUGH SERVICE LAMPS • VIBRATION SERVICE LAMPS.

For more details circle **NED-3004** on enclosed inquiry slip

Fluid Power Improves Production

"LOGAN" Rotocast® HYDRAULIC CYLINDERS

Built into this new Logan line are operational advancements that will help you improve product efficiency and reduce costs. Here's fast-acting, positive controlled power for all types of industrial applications.

7 STANDARD MOUNTINGS
Rabbited • Foot • Center Line • Clevis • Trunnion • Flange at blind end • Flange at rod end—or any desired combination.

Standard Rotocast Hydraulic Cylinders in sizes from 2" to 8" bore; any length stroke up to 8 feet. Other bores and lengths are special. Four piston rod end types. Operating pressures to 1500 p.s.i. Logan Rotocast Cylinders properly conditioned can also be used for water service.

CHECK THESE ROTOCAST FEATURES AGAINST YOUR PRESENT SETUP

- Smooth, uniform power flow assured by clean, accurate cylinder bores—honed to a mirror finish.
- Close-grained centrifugal-cast barrel assures dimensional accuracy throughout life of cylinder.
- Maximum power assured. Automotive-type piston rings and smooth, true bore minimize friction and leakage past the piston.
- Permanent, leakproof seal between barrel and end covers provided by "O" rings of pliable, synthetic material. No gaskets.
- Standard models with or without cushioning. Vent ports may be located at top, bottom or either side. Piston rods available in standard, 2:1 differential, and double end types.

ENGINEERING COUNSEL
Write for recommendations on the proper cylinders for your applications and most effective method of installation.

Logan SAVES TIME • LABOR • MOTION
Air and Hydraulic Equipment
LOGANSPORT MACHINE CO. INC. 808 Center Ave. Logansport, Ind.
CHECKS • CYLINDERS • VALVES • PRESSES • SIDE-FLOW COOLANT PUMPS

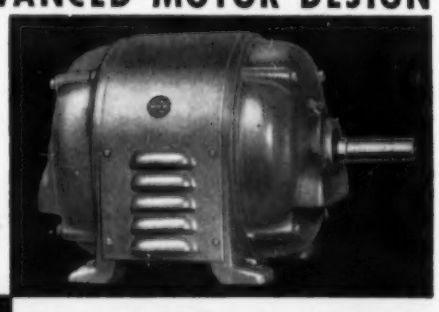
FREE CATALOG
Send for catalog on Logan ROTOCAST Hydraulic Cylinders. Also ask for data on Logan Hydraulic Valves and Power Units.

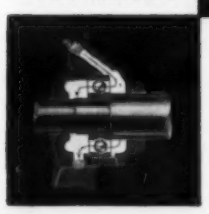
FLUID POWER SPECIALISTS SINCE 1916

For more details circle **NED-3005** on enclosed inquiry slip

MOST ADVANCED MOTOR DESIGN

ASBESTOS PROTECTED • NORMALIZED CASTINGS • LUBRIFLUSH • DUAL CYCLONE VENTILATION





ALSO VARIDRIVE AND SYNCROGEAR TYPES

U.S. UNICLOSED MOTOR

Self-lubricated for normal life plus Lubriflush for longest life

Only in U. S. Motors do you get this unsurpassed combination—self-lubricated bearings plus Lubriflush. Years of extra motor service without re-lubrication can be expected. Then if you desire to eventually re-lubricate it can be quickly accomplished by Lubriflush. The U. S. Uniclosed motor, illustrated above, is available in ratings from ¼ to 250 h.p.

U.S. ELECTRICAL MOTORS, Inc.
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Free Bulletin

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U. S. Electrical Motors, Inc. NE
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NAME_____
COMPANY_____
ADDRESS_____
CITY_____ ZONE____ STATE_____

For more details circle **NED-3006** on enclosed inquiry slip

New Literature—Continued

Broaching Equipment

American Broach & Machine Co.—32-page illustrated catalog 450 is guide for selection and use of internal and surface broaches, broach holders, and pull and push broach connecting heads. Actual operations involving internal and surface broaching are presented in case study form.

For more details circle **NED-3007** on enclosed inquiry slip

Blowers

Standard Stoker Co.—Complete performance and application data on line of Standardaire blowers for service up to 20 psi are given in 4-page technical bulletin No. 86. Blowers can be direct-connected to standard speed motors and are available in capacities up to 10,000 cfm.

For more details circle **NED-3008** on enclosed inquiry slip

Rotary Files

R. G. Haskins Co.— Described and illustrated in 4-page bulletin RF-50 are cylindrical, tree-shaped, spherical, elliptical and conical high speed, high-cut or ground files and also ground-from-solid carbide files and burs.

For more details circle **NED-3009** on enclosed inquiry slip

Heat & Corrosion Resistant Equipment

Strohecker Inc.—Details on line of equipment that resists heat and corrosion are offered in 8-page illustrated bulletin "Specialized Alloy Fabrication." Enamel burning tools, pickling fixtures, heat treating carriers and alloy chain are some of the products covered.

For more details circle **NED-3010** on enclosed inquiry slip

Socket Screws

Parker-Kalon Corp.—16-page illustrated socket screw bulletin No. 490 outlines engineering data on high tensile alloy, stainless steel and standard socket screws. Stripper bolts, pipe plugs and hexagon keys are also listed according to standard sizes.

For more details circle **NED-3011** on enclosed inquiry slip

Torque Converter-Diesel Engine

General Motors Corp., Detroit Diesel Engine Div.—24-page illustrated catalog "The New General Motors Diesel Engine-Torque Converter Unit" describes series 71 three, four and six-cylinder two-cycle diesel engines which are equipped with integral torque converter and fluid coupling. These power units are for all types of stationary and mobile equipment. Single and twin engine units develop up to 294 shaft horsepower.

For more details circle **NED-3012** on enclosed inquiry slip

Electric Plug-In Components

Alden Products Co.—18-page illustrated loose-leaf bulletin "Na-Ald Components for Plug-In, Unit Construction" describes slide-in lock-in chassis, color-coded back connectors for slide-in or plug-in units, housings and bases for plug-in units, top-operated clamps for tubes and plug-in units, and quick-acting fastenings and locks.

For more details circle **NED-3013** on enclosed inquiry slip

Arc Welding Machines

Air Reduction Sales Co.—36-page illustrated catalog gives data on all arc welding machines in the Airco line. Both direct and alternating current units are described in detail with performance and operating data.

For more details circle **NED-3014** on enclosed inquiry slip

Alloy Castings

Cooper Alloy Foundry Co.—A comprehensive analysis of stainless, corrosion and heat resistant alloy castings is presented in 6-page "Cooper Alloy 1950 Reference Chart." Alloy designations, suggested applications, properties and analyses are given in usable tabular form.

For more details circle **NED-3015** on enclosed inquiry slip

Precision Gages

Cadillac Gage Co.—36-page illustrated catalog "Cadillac Gages" covers entire range of precision gages manufactured and contains charts showing various sizes available as standard. Line includes thread plug and ring, concentricity, pipe thread, reversible cylindrical plug, Pla-Chek, special toolmaker's and adjustable snap gages.

For more details circle **NED-3016** on enclosed inquiry slip

Electric Fans

Emerson Electric Mfg. Co.—32-page illustrated catalog "Fans for 1950" gives complete details on Junior, low-table, overlapping-blade, Parker-blade, direct current, ceiling, window, exhaust, ventilating and other types of fans. Supplementary price list is included.

For more details circle **NED-3017** on enclosed inquiry slip

Steam Generators

York-Shipley, Inc.—Seven illustrated 4-page bulletins give specifications and performance data on complete line of Steam-Pak steam generators in ratings of 15 to 150 boiler horsepower and designed for burning various combinations of fuels including gas and oil.

For more details circle **NED-3018** on enclosed inquiry slip

When is a lathe too big?

A lathe is too big when:

SHELDON

TS56B
11¼" Swing

(1) When it is too large and complex for any but the most experienced to operate safely.

(2) When the power cost is excessive for the tool load.

(3) When the tool investment is out of all proportion to the requirements.

(4) When it is too cumbersome and too slow.

(5) When it takes up floor space, heat and light in which output could be multiplied with smaller machine tools.

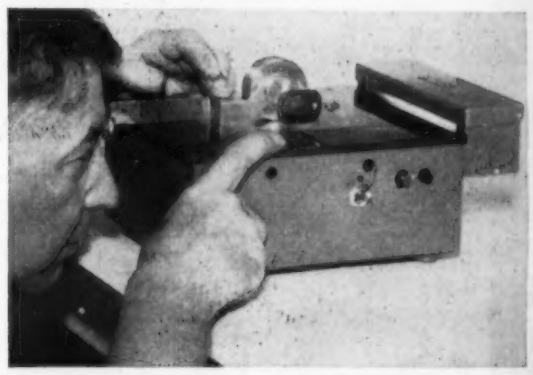
Modern Sheldon Precision Lathes, eliminate these excess costs and loadings—leave far more on the profit side. 10"—11" and 12" Swing. "Zero Precision" Tapered Roller Bearings. Increased collet capacity.

Write for catalog.

SHELDON MACHINE CO. Inc.
Manufacturers of Sheldon Precision Lathes • Milling Machines • Shapers
4215 N. KNOX AVENUE • CHICAGO 41, ILLINOIS, U. S. A.

For more details circle **NED-3019** on enclosed inquiry slip

Wet or Dry THICKNESS GAGE



Measure foils or unattached sheet materials by the "feeler gage" method. A "visual" method is used to determine simply and accurately the thickness of attached coatings such as paint materials on steel, aluminum, glass or any reasonably flat base.

Send for descriptive literature. Dept. NED

GARDNER LABORATORY, INC.
4700 Elm Street Bethesda 14, Md.

For more details circle **NED-3020** on enclosed inquiry slip

Take the "ugh" out of tough cutting jobs!

KETT
UNIVERSAL SAW
Z-I-P-S THROUGH SHEET METAL, PLYWOOD, PLASTICS AND COMPOSITION MATERIAL!

IN the shop or on the job, here's the handiest handful of cutting power you've ever used. The Kett Saw cuts plastics and other soft material up to ¼" thick, aluminum to 3/16", and mild steel and galvanized metal up to 10 gauge, for intermittent use. No starting hole required to cut straight lines or curves of 6" radius or larger. Tough, long lasting blades are easily changed.

For complete information and action photos, write for Bulletin E-4.

THE KETT TOOL COMPANY
5 EAST THIRD STREET CINCINNATI 2, OHIO

For more details circle **NED-3021** on enclosed inquiry slip

Write for BULLETIN No. 48

BARREL TRUCKS
DRUM TRUCKS
KEG TRUCKS
PACKAGE TRUCKS
BOX TRUCKS
COIL TRUCKS
SHOP TRUCKS
TOTE PAN TRUCKS

..before you buy one-man TRUCKS see the SABIN LINE

BARREL TRUCK
With this truck, one man easily picks up loaded barrels and drums weighing up to 800 pounds. Exclusive third wheel feature insures better balance and added safety.

In addition to the trucks listed above, we manufacture Special Trucks to meet your individual needs.

Sabin trucks are a quality product at a reasonable price. They are built for easy handling and long, satisfactory service.

THE SABIN MACHINE CO.
6536 Carnegie Avenue
CLEVELAND 3, OHIO

▲ For more details circle NED-3022 on enclosed inquiry slip ▲

New! NOW!

AMAZING COOLING SYSTEM ALGAECIDE
BROOKS
POLYCIDE
WITH
EMULSITE

First!

Now is the season when algae deposits begin forming in your cooling system. But THIS season you can effectively guard against and prevent this problem.

After long and concentrated research, Brooks' chemical engineers have developed a new algaecide for water cooling systems, Brooks-Polycide with Emulsite. Brooks laboratory and field tests have shown that this concentrated emulsion will effectively eliminate organic deposit in the cooling systems and KEEP THEM CLEAN.

Because of its great stability and concentrated form, Brooks-Polycide can be used in closed systems with great economy. Small, infrequent "booster" shots are all that is required to maintain a clean system. Open systems can be treated in a similar manner. In treating once-through systems, one or two shots per day will suffice to prevent algae deposits.

Brooks-Polycide is available in 5, 15, 30 and 50 gallon containers. We invite you to write for literature and samples to . . .

BROOKS BOILER TREATMENT CO.
3304 East 87th St. Cleveland, Ohio

▲ For more details circle NED-3023 on enclosed inquiry slip ▲

...'s a CHROMALOX Unit made for al... every industrial heating application! ...her it's gases, fluids or solids being ...d, you can do it economically and ...ntly with these versatile, easily in...d Heaters. Find out for yourself how ...MALOX Electric Heat can save time ...money in your plant.

FOR THE FACTS ABOUT ELECTRIC HEAT

Send for the idea filled booklet "100 Ways to Apply Electric Heat." It's yours for the asking.

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CHROMALOX 18-77

ELECTRIC HEAT FOR MODERN INDUSTRY

For more details circle NED-3024 on enclosed inquiry slip ▲

New Literature—Continued

Insulated Piping Systems

Ric-Wil Co.—Two illustrated technical data sections 480-4 and 480-5 are prepared for those concerned with problems involving insulated piping systems. First bulletin describes manufacture, construction and installation of various types of Ric-Wil insulated piping, and second deals with technical data and specifications on all phases of insulated piping, its structure, properties and installation procedures.

▲ For more details circle NED-3025 on enclosed inquiry slip ▲

Self-Lubricating Packings

Greene, Tweed & Co.—Design principles of self-lubricating packings as well as structure, performance and application data are given in 4-page illustrated bulletin LP-10.

▲ For more details circle NED-3026 on enclosed inquiry slip ▲

Dust Collectors

Aget-Detroit Co.—Rapid selection of correct size unit type dust collectors for any industrial application requiring from 200 to 3600-cfm capacity is facilitated by bulletin No. 610. General recommendations of typical wheel sizes that any single unit will handle are given as well as method for determining correct amount of air suction.

▲ For more details circle NED-3027 on enclosed inquiry slip ▲

Solder Pre-Forms

Soldering Specialities—"How to Speed Up Soldered Assemblies with Solder Pre-Forms" is title of 4-page illustrated job study. Featuring illustrated chart which shows applications in diverse fields and instances, bulletin is arranged to tell the 'what, how and when' of uses of pre-formed solder shapes.

▲ For more details circle NED-3028 on enclosed inquiry slip ▲

Drills, Reamers & Punches

Whitman & Barnes—General catalog No. 102 describes and lists tools used in drilling, reaming and punching operations. Included are drills and reamers made of high speed, carbon and cobalt steels; tungsten carbide tools; and interchangeable punches made of carbon and high speed steels.

▲ For more details circle NED-3029 on enclosed inquiry slip ▲

Small Power Transformers

Allis-Chalmers Mfg. Co.—28-page illustrated bulletin 61B6084A describes single-phase transformers for 69,000 v and below rated up to 5000 kva and three-phase transformers for 69,000 v and below for up to 15,000 kva. Included are table of preferred voltage ratings for step-down power transformers and photographs of typical applications.

▲ For more details circle NED-3030 on enclosed inquiry slip ▲

Cushioning Clamps

Thomas Associates—32-page illustrated 1950 catalog presents specification data on clamps with standard neoprene, aromatic fuel resistant, conductive rubber, Skydrol fluid resistant, high temperature and fire resistant cushions. In addition, 15 standard clips, clamps and brackets are described.

▲ For more details circle NED-3031 on enclosed inquiry slip ▲

Coil Stock & Spindle Reels

F. J. Littell Machine Co.—How to reduce handling costs and speed punch press production are explained in 4-page illustrated bulletin 5-EE. Available types of single, double and motor-driven automatic-centering reels which handle wide range of coil sizes and strip widths are described.

▲ For more details circle NED-3032 on enclosed inquiry slip ▲

Water Jet Pumps

Schutte & Koerting Co.—36-page illustrated bulletin 2M describes line of SK Water Jet Eductors for use in lifting, pumping, mixing and agitating of liquids and handling of solids and slurries at low cost. Colored flow diagrams indicate typical applications in diversity of industries.

▲ For more details circle NED-3033 on enclosed inquiry slip ▲

Hydraulic Truck Cranes

Ruger Equipment Co.—Wide range of applications for hydraulic truck cranes that have capacities of ¼, ½, 1 and 2 tons is illustrated in 6-page bulletin that depicts how one man with one of these cranes can do work of labor gang.

▲ For more details circle NED-3034 on enclosed inquiry slip ▲

Hand Lift Trucks

Lewis-Shepard Products Inc.—Jacklift hydraulic and mechanical hand lift trucks and Weldmaster skid, rack, bin and shelf platforms are reviewed in illustrated bulletin No. 26. Details, specifications and engineering features of trucks in capacities from 500 to 15,000 lb and more are included. Installation pictures showing particular adaptability of various types of trucks are shown.

▲ For more details circle NED-3035 on enclosed inquiry slip ▲

Glove costs cut 65%

Grab-it Coated Glove

Nap Out Double Palm Glove

WORN 6 HOURS
by Bricklayer's Helper

CASE NO. 194
Workmen regularly wore out double-palm fabric gloves handling 3000 bricks, laid without mortar in kiln floor. Same men with Grab-it Gloves now handle 15,000 bricks, reducing glove cost from 9c per thousand bricks to 3.2c. All tests showed close 5-to-1 wear ratio. Full details on request.

You can make comparable savings. On load-handling and work with sharp-edged, abrasive or slippery materials, equipment and tools, Grab-it gloves far outlast canvas or costlier leather and grip safely, wet or dry. Their tough, rough-surfaced natural rubber, bonded to strong fabric, wears like a tire. Many styles; coated overall or palm and thumb.

FREE TEST: Write today, stating your job condition, materials handled and temperature. We supply sample gloves and complete test details to employers, without cost.

MANAGEMENT: It pays to promote better work gloves. Every dollar saved directly increases your profits — or the net income and good will of workers who buy their own.

Grab-it FIRM GRIP—NO SLIP
Edmont Mfg. Co.
503 Orange St., Coshocton, Ohio

▲ For more details circle NED-3036 on enclosed inquiry slip ▲

NEW! STAINLESS STEEL BODY

makes a good steam trap better . . . at no increase in cost to you. Means reduced maintenance for the trap that gets equipment hotter, sooner and keeps it hot! Over 600,000 Yarways already installed! Sold by distributors throughout the world.

YARNALL-WARING CO. 131 Mermaid Ave., Phila. 18, Pa.

▲ For more details circle NED-3037 on enclosed inquiry slip ▲

NEW MODEL • NEW FEATURES . . .
Sensational LOW PRICE!
FOREDOM FLEXIBLE SHAFT MACHINE No. 9050
ONLY $27.95 Complete with FOOT RHEOSTAT and Quick-Detachable PENCIL-SIZE HANDPIECE

Quality Tested Since 1922

On the bench, mounted under the bench or hung up. 1/15 H.P. high speed air-cooled universal motor, amply powerful "FOR EVERY LIGHT GRINDING, FINISHING, and DE-BURRING JOB." Also available with ball-bearing handpieces—pencil size or larger—at proportionately low prices.

Order one now. Catalog 5214, on request.

FOREDOM ELECTRIC CO., Dept. 5214
27 Park Place, New York 7, N. Y.

Send your catalog No. 5214, showing different uses of Foredom Flexible Shaft Machines.

NAME ....
ADDRESS ....
CITY & ZONE ....
STATE ....

▲ For more details circle NED-3038 on enclosed inquiry slip ▲

Put these advantages in your product with Marvinol®

In hundreds of processes . . . in thousands of end products, Marvinol is giving processors the characteristics that mean sales. Marvinol formulations are stable under heat, light and time . . . have high dimensional stability, greater low-temperature flexibility, outstanding resistance to tear, wear, oils and acids. Let us show you how to utilize Marvinol's time-saving advantages. All technical information developed in our modern laboratories is at your disposal since it is through you that Marvinol reaches the consumer.

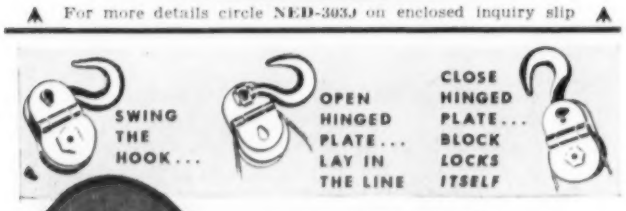
Write today for the latest technical information. Dept. E-4, Naugatuck Chemical, Naugatuck, Conn.

Marvinol

Naugatuck Chemical

DIVISION OF U. S. RUBBER COMPANY

For more details circle NED-3039 on enclosed inquiry slip



RIG IT IN **5 seconds!**

Here's a snatch block any man can rig in 5 seconds . . . *without a wrench!* No loose parts; nothing to drop or lose. Available in 6", 8" and 10" sheave diameters. Sold by distributors everywhere. For catalog showing all wire rope blocks—1½ to 250 tons . . . write

American Hoist & Derrick Company
St. Paul 1, Minnesota

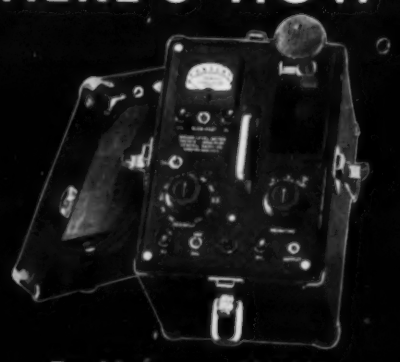
Plant No. 2: South Kearny, N. J.
Sales Offices: New York, Pittsburgh, Chicago

22 5301

AMERICAN HEAVY DUTY UTILITY SNATCH BLOCK

For more details circle NED-3040 on enclosed inquiry slip

HERE'S HOW



To Measure NOISE

Simply · Conveniently · Accurately

Thousands of G-R Type 759-B Sound-Level Meters are in use in industry for hundreds of different types of noise measurement. The Meter is direct reading from 24 to 140 db . . . covering the lowest practical level to that beyond a locomotive whistle. It can be operated by anyone . . . it is very valuable in measuring plant noise, product noise, analyzing and correcting excessive noise in equipment . . . comparing the effectiveness of soundproofing materials. Its price . . . complete and ready to use . . . $320.00

WRITE FOR THE "NOISE PRIMER"

GENERAL RADIO CO.
Cambridge 39, Massachusetts
NEW YORK CHICAGO LOS ANGELES

For more details circle NED-3041 on enclosed inquiry slip

New Literature—Continued

Power Distribution System

Trumbull Electric Mfg. Co.—40-page illustrated catalog TEB-1 is descriptive of LVD and SAC heavy-duty Flex-A-Power power distribution systems which are used as main feeders. Comparative analysis between Flex-A-Power and standard wire and conduit systems on basis of cost and performance is made. Covered also are construction details, accessories, engineering data and application data.

For more details circle NED-3042 on enclosed inquiry slip

Measurement & Control

Fischer & Porter Co.—Pycnorator instruments for measurement and control of fluid density and specific gravity are explained and illustrated in 8-page catalog No. 76. Listed are submerged float instruments for use in vessels under pressure or vacuum, open bubblers, and closed diaphragm and hydrometer types. Instruments are available also which operate in conjunction with Ranarex specific gravity measuring system.

For more details circle NED-3043 on enclosed inquiry slip

Chlorine

Diamond Alkali Co. — 44-page illustrated technical manual "Chlorine Handbook" discusses proper containers for packaging liquid chlorine; gives data on chlorine service tools and equipment; shows typical installations; and presents information on first aid measures, gas masks and emergencies. Comprehensive review of major physical properties of chlorine is included.

For more details circle NED-3044 on enclosed inquiry slip

Reducing Valves

Klipfel Valves, Inc.—Selection chart and 24-page illustrated bulletin No. 148 are intended to aid those who must specify reducing valves. By reference to service for which valve is intended, reduced pressure limits and other factors, selection of correct valve can be made easily.

For more details circle NED-3045 on enclosed inquiry slip

Antifriction Bearing Standards

"Gaging Practices for Ball and Roller Bearings" is title of 12-page manual which specifies most acceptable methods of determining whether bearings conform to specified dimensions. It defines inspection methods giving gaging loads and methods of measurement. Standard methods are given for obtaining dimensions of inner and outer rings, parallelism of sides, eccentricity, groove parallelism with sides and other significant measurements. Price is 50 cents. Obtainable directly from American Standards Association, 70 E. 45th St., New York 17, N. Y.

For more details circle NED-3046 on enclosed inquiry slip

Portable Electric Tools

Independent Pneumatic Tool Co.—Three illustrated circulars cover Thor line of universal electric, mining and contractors' tools. Bulletin JE-1148 describes Copper Line tools; circular JE-1139 discusses model 35 sinker rock drill; and No. JE-1132 catalogs sinker leg, air bar feed, pneumatic column and stoper leg.

For more details circle NED-3047 on enclosed inquiry slip

Aluminum Casting Alloys

American Smelting & Refining Co., Federated Metals Div.—40-page illustrated booklet "Aluminum Casting Alloys" contains sections on pouring, shrinkage, dross control, solution treating, aging, stress relief, corrosion, test bars, gas absorption and effects of moisture.

For more details circle NED-3048 on enclosed inquiry slip

Automatic Metering System

Hetherington & Berner Inc.—Fluidometer system for automatic batching of either light or heavy liquids is described in 8-page illustrated bulletin FL-49. It is applicable to practically every liquid measuring problem. System consists of three principal parts: control unit, meter of suitable size and metal, and valve. Units can be grouped together or placed remotely, according to plant convenience.

For more details circle NED-3049 on enclosed inquiry slip

Gear-Motors

Janette Mfg. Co.—Major features of various types of standard fractional and integral horsepower gear-motors are outlined in 4-page illustrated bulletin No. 3-100. Units are available in 13 types and 30 sizes ranging from 1/12 to 7½ hp and with 450 to 0.05 rpm output speed.

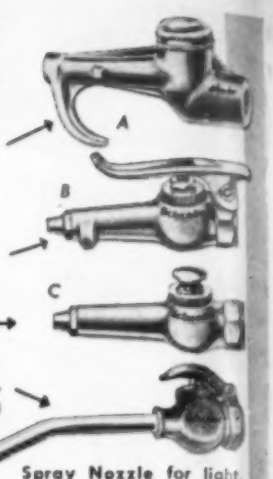
For more details circle NED-3050 on enclosed inquiry slip

Automatic Finishing Machines

Hammond Machinery Builders, Inc.—Described in 8-page illustrated catalog No. 50, Super model K-46-6 indexing rotary automatic polishing and buffing machines feature fast indexing, variable work spindle speeds and variable dwell time. Also covered are smaller J series indexing and continuous rotaries, Strait-line automatics, and various types of abrasive belt and wheel type heads.

For more details circle NED-3051 on enclosed inquiry slip

HEADQUARTERS FOR BLOW GUNS



Drop Forged Stainless Steel for hard use and long life. Comfortable grip; protected, countersunk nose; hang-up hook; shielded button; practically indestructible.

Lever type forged brass. Controllable air flow type—zephyr to a blast.

Button type forged brass. Popular all-purpose gun.

Featherweight Blow Gun. Light-weight, brass body. Convenient for getting into out-of-way places.

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Heavy Duty Blow Gun. Brass body with steel nose. Has double or more the air capacity of guns above.

Blow Guns A, B and C may be fitted with a wide variety of noses: long, angular, flared, etc., some with adjustable air flow feature.

Write for information on Schrader Blow Guns. For information on the hundreds of Schrader Industrial Air Control Products . . . Hose Reels, Press Controls, Air Ejection Sets, etc., write for 72-Page catalog.

A. SCHRADER'S SON
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Division of Scovill Manufacturing Company, Incorporated

Schrader PRODUCTS CONTROL THE AIR

For more details circle NED-3052 on enclosed inquiry slip

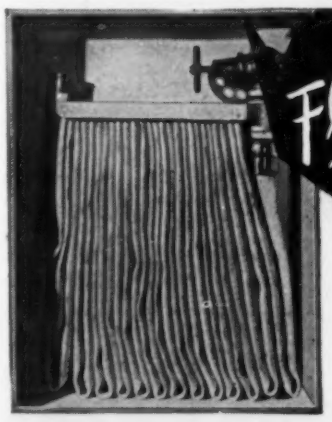
TO ANYWHERE IN THE U.S.A.

PROMPT SPEEDY DELIVERY OF UNIVERSAL DRILL BUSHINGS

You will receive prompt speedy delivery of any size Universal Drill Bushings to any point in the United States — orders for standard size bushings will be filled and shipped within 24 hours — because our warehouses are so located and stocked as to give excellent service without delay. Order by teletype, phone, wire or letter from your nearest Universal warehouse at 1060 Broad Street, Newark, N. J.; 5035 6th Ave., Kenosha, Wisc., or Frankenmuth, Michigan.

UNIVERSAL ENGINEERING COMPANY
FRANKENMUTH 5, MICHIGAN

For more details circle NED-3053 on enclosed inquiry slip



Flexcelo FIRE HOSE *at last,*

COTTON-JACKETED RUBBER-LINED FIRE HOSE FOR INSIDE USE

Flexcelo Fire Hose, a sensational new single-jacketed, cotton, rubber-lined fire hose, is now ready for your cabinet or wall-type hose racks!

Thoroughly tested and approved by Factory Mutual Laboratories, Flexcelo Fire Hose gives you greater protection and vastly better service than any unlined hose you've ever used.

Flexcelo is easier to handle! It's easier to test and it's extremely flexible, even under pressure!

Because Flexcelo is a rubber-lined hose, there's never any leakage of water through the jacket. This eliminates hose-drying problems and ends the nasty mess of getting water anywhere but on the fire.

Flexcelo Fire Hose is available in 1½ inch only in 25, 50, 75 and 100-foot lengths. Every length is shipped complete with brass couplings, and for long-time protection against mildew, Flexcelo is available with Republic's exclusive Provar Process.

Your Republic Distributor can give you all the facts. Consult him today or write Republic direct for further information.

MECHANICAL RUBBER GOODS BY **REPUBLIC RUBBER DIVISION**

REPUBLIC RUBBER DIVISION
LEE RUBBER & TIRE CORPORATION, YOUNGSTOWN, OHIO
LEE DELUXE TIRES & TUBES, CONSHOHOCKEN, PA.

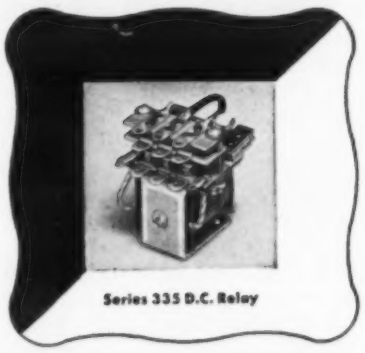
For more details circle NED-3054 on enclosed inquiry slip

ONE OF THE LINE of dependable GUARDIAN CONTROLS

Easy Sailing ALONG YOUR ASSEMBLIES . . .

Try the Guardian Series 335 D.C. Relay, one of hundreds of basic Guardian Relays. A general purpose relay with a wide range of applications, the Series 335 is built to the rigorous standard of aviation relays. The Series 335 D.C., the most Guardian relays, is now available Hermetically Sealed.

Write for your copy of the new Guardian Catalog featuring Hermetically Sealed Relays.



Series 335 D.C. Relay

GUARDIAN ELECTRIC
1626-D W. WALNUT STREET CHICAGO 12, ILLINOIS
A COMPLETE LINE OF RELAYS SERVING AMERICAN INDUSTRY
For more details circle NED-3055 on enclosed inquiry slip

FEROX
REG. U. S. PAT OFF.
Destroys Rust . . . Saves Metal

FEROX removes *all* rust—from heaviest scale to lightest film . . . safely . . . quickly . . . easily . . . economically!

FEROX handles entire range of Rust Removal. It is used full strength for heavy duty work . . . extended with 1 to 10 parts water for thin sections and intricate parts.

FEROX IS SAFE . . . will not burn nor distort metal and is non-inflammable.

FEROX WORKS FAST. When used hot, FEROX completely removes rust in 5 to 20 minutes. Used cold, same solution removes all rust within 45 minutes.

FEROX IS EASY TO USE. Simply soak small parts until rust disappears or rub large areas with coarse rags, steel wool or stiff bristled brushes dipped in FEROX.

FEROX SAVES YOU MONEY . . . Much more than it costs. It reconditions rusted metal, protects the metal against further rust destruction. Rust Removal with FEROX is quicker, cheaper, safer and more thorough than sand blasting and doesn't make noise or dust.

PROVE TO YOURSELF THAT FEROX WILL MORE THAN PAY FOR ITSELF! Order a 4 gallon trial unit of FEROX at $16.00, F.O.B. Phila. Try 2 gallons. If not delighted, return balance within 30 days, transportation prepaid, and we will cancel the invoice.

WHAT CAN YOU LOSE?—Send your trial order today!

DEPARTMENT F
SERVICE INDUSTRIES
2103-05-07 E. SOMERSET STREET
PHILADELPHIA 34, PA.
For more details circle NED-3056 on enclosed inquiry slip

Cut costs with a Binks DP* portable spray unit

The only paint spray unit that gives you 1 H.P. performance at ⅓ H.P. cost

Ideal for touch-up work; maintenance; small parts finishing; dusting; spray assemblies on the floor • Powerful—compact ⅓ h.p. 110-120 volt, a.c. motor • Safe—no exposed moving parts. Includes safety overload cut-out • Pulsation chamber—gives smooth, unbroken air-flow at 40 lbs. Traps oil, water, dust, from air • Portable—weighs but 47 lbs. Works anywhere there's an electric outlet.

Send today for your free copy of Bulletin No. 601, describing the DP unit and 8 spray gun combinations for use with it.

*Drive Piston

Binks MANUFACTURING COMPANY
3122-34 West Carroll Ave., Chicago 12 Ill.
For more details circle NED-3057 on enclosed inquiry slip

New Literature—Continued

Pipe Locator & Leak Detector

Fisher Research Laboratory, Inc.—"The M-Scope" is title of 16-page illustrated booklet dealing with electronic device for locating pipe and detecting leaks. It locates exact position of buried pipe lines or metallic conductors, pipe bends, dead ends, valves, covered manholes, drip boxes, cast-iron bells, insulated joints, stubs, center of buried conductor, depth of pipe line, unknown metallic hazards in path of excavators and points of obstruction in plugged sewer.

For more details circle NED-3058 on enclosed inquiry slip

Electrostatic Precipitation

General Electric Co.—16-page illustrated bulletin No. GEA-5212 explains principles of electrostatic precipitation, gives case histories of seven typical installations using system, and describes various methods and the electric equipment applicable to each method. System removes fine particles of dust, smoke, fog, fume or mist.

For more details circle NED-3059 on enclosed inquiry slip

Sand Pumps

Denver Equipment Co.—Rubber-lined sand pumps designed to handle abrasive sands and slimes economically over long continuous operating periods with minimum of interruptions and maintenance are described and depicted in 16-page bulletin No. P9-B6. These pumps can be used also in general industry for pumping acids too corrosive to be handled by any commercially available alloy.

For more details circle NED-3060 on enclosed inquiry slip

Tungsten Carbide Blasting Nozzles

Victor Equipment Co.—Super-Titan blasting nozzles having tungsten carbide liners are described in 12-page illustrated folder form No. 311. Recommended blasting pressures, displacement of standard compressors, recommendations for types of machine and size and length of hose, and other data are tabulated.

For more details circle NED-3061 on enclosed inquiry slip

Mobile Shovel-Cranes

Link-Belt Speeder Corp.—Applications, design features, user benefits and specifications of the new HC-51 truck-mounted shovel-crane with Speed-o-Matic hydraulic controls are discussed in illustrated bulletin No. 2322. Having 12½-ton capacity, machine features ten speeds forward, two in reverse and travel speed up to 37 mph.

For more details circle NED-3062 on enclosed inquiry slip

Floor Resurfacing Material

Stonhard Co.—"Eliminate Ruts or Holes in Your Floors" is title of illustrated folder dealing with Stonhard Stontop resurfacer which penetrates into concrete and firmly anchors surface together. It hardens surface against abrasive wear and penetration of grease, oil, acid or floor disintegrating compounds.

For more details circle NED-3063 on enclosed inquiry slip

Instrument & Control Panels

Hays Corp.—Numerous photographs of instrument and control panels of all types in use in variety of industries are shown in 8-page bulletin No. 773. All operations of fabrication are discussed; and particular features like electric clocks, pressure gages, transformers, nameplates, pushbutton stations and signal lights are explained.

For more details circle NED-3064 on enclosed inquiry slip

Water Demineralizers

Barnstead Still & Sterilizer Co.—20-page illustrated catalog No. 123 describes in detail the difference between distilled and demineralized water. It shows how ion-exchange purification operates and cites case histories on quality control of water.

For more details circle NED-3065 on enclosed inquiry slip

Gear Hobbing Machines

Gould & Eberhardt, Inc.—28-page illustrated catalog No. 233 describes universal manufacturing gear hobbing machines which are designed for accurate, rapid and economical production of large and small quantities of spur, helical and worm gears; worms; spline shafts; ratchets and sprockets.

For more details circle NED-3066 on enclosed inquiry slip

Air Gas Cleaners

American Air Filter Co.—Nine sizes of Cycoil oil bath air and gas cleaners and intake silencers for engine and air compressor service are described in 8-page illustrated manual 130-E. New designs, improvements and application data are given.

For more details circle NED-3067 on enclosed inquiry slip

Posture Chairs

Domore Chair Co.—"Physical Fitness & Personal Appearance" is title of 16-page illustrated booklet which discusses importance of correct sitting posture and describes line of executives' chairs. Since they are anatomically adjustable, they can be individually fitted to encourage and help maintain correct sitting posture.

For more details circle NED-3068 on enclosed inquiry slip

60% Saving in Man-Hours by ELWELL-PARKER Truck!

• Before purchasing this E-P fork truck, it required 20 man-hours at a grocery warehouse to unload and store 2000 cases of food. Now, with the Elwell-Parker, *only 8 man-hours are needed* . . . By tiering loads to the roof, the truck also permits maximum use of *all* floor space.

To learn about notable savings being made by Elwell-Parker trucks in over 300 different branches of industry, send for:—

FREE BOOKLET on *Scientific Materials Handling.* Ask for a copy of "Industrial Logistics".

THE ELWELL-PARKER ELECTRIC COMPANY
4093 St. Clair Avenue • Cleveland 3, Ohio
For more details circle NED-3069 on enclosed inquiry slip

FOR ANY JOB IN SCREW DRIVING

There's an ARO TOOL to help you

At the Hotpoint plant, Aro No. 7039 drives sheet metal screws in assembling automatic washing machines.

Increase Production, Reduce Costs!

You name the job—in tough assembly screw driving or nut setting—ARO has the tool to do it *faster* and *reduce your costs!* Broad range of models and capacities from No. 0-80 to No. 14 screws . . . 450 r.p.m., 750 r.p.m., 1000 r.p.m., 2400 r.p.m. . . . specially designed for high production . . . improved workmanship . . . lower unit costs . . . less work spoilage . . . fewer broken bits . . . longer tool life. See your nearest industrial distributor . . . or write for bulletin. The Aro Equipment Corporation, Bryan, Ohio.

ARO AIR TOOLS
Also . . . LUBRICATING EQUIPMENT . . . HYDRAULIC EQUIPMENT . . . AIRCRAFT PRODUCTS . . . GREASE FITTINGS

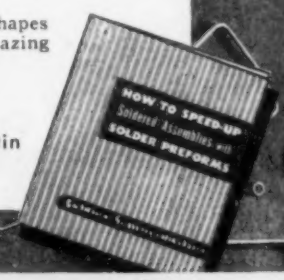
Aro of Canada, Ltd., Toronto
For more details circle NED-3070 on enclosed inquiry slip

this Bulletin tells you how to SPEED-UP Soldered Assemblies with SOLDER PREFORMS

Now you can eliminate tedious manual solder operations from your assembly lines. Solder Preforms, custom-made to meet your products' particular requirements help solve many production bottlenecks. They provide more perfect bonds, reduce labor costs and set new production records wherever they're used.

Available in all shapes and sizes . . . in brazing and solder alloys.

SEND for this Informative Bulletin Today!



Soldering Specialties
17 Chatham Rd., Summit, N. J.
For more details circle NED-3071 on enclosed inquiry slip

Adjustable GLENNY BROACHES

FOR PRECISION KEYWAY CUTTING

BROACHES

ADAPTERS

COMPLETE KIT

GLENNY push broaches are available from stock in sizes ranging from 5/16" to 2" in increments of 1/16". Interchangeable blade widths can be furnished for each size broach. Adjustment for depth of cut is infinitely variable. Tooth design provides large chip chamber and maximum cut.

Eccentric adapters permit use of standard GLENNY broaches to cut accurate keyways in bores larger than broach diameter. New tapered adapters facilitate keyway cutting in tapered or straight bores. Adapters are available individually or in complete sets.

GLENNY broach kits are complete packaged units. Each kit contains specified standard size broach, interchangeable blades, and bushing-type adapters which permit keyway cutting in six different diameter bores. Steel carrying case with wood insert for tool protection is included.

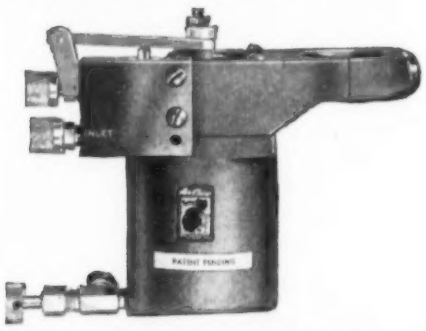
WRITE FOR BULLETIN NO. 12

KASE MACHINE CO.

18534 Buffalo Avenue Cleveland 19, Ohio

For more details circle NED-3072 on enclosed inquiry slip

DOUBLE YOUR DRILL PRESS OUTPUT FOR $30



USE A NEW MEAD PNEUMATIC DRILL PRESS FEED FOR DRILLING REAMING TAPPING

This simple, inexpensive device quickly converts standard drill presses into semi-automatic machines — increases production substantially on suitable jobs: double or more in some cases.

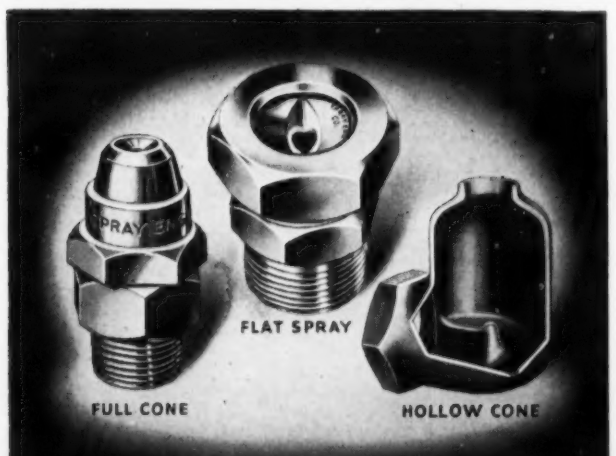
Clamps to spindle quill in a few seconds. Automatically closes air fixture on work. Adjustable feed control and break-through cushion. Quick return. Easy to synchronize with automatic cycle equipment.

Air-Power does it quicker, cleaner, better. Write today for latest complete catalog.

MEAD SPECIALTIES COMPANY

4114 NO. KNOX AVE., DEPT. NA-40, CHICAGO 41, ILL.

For more details circle NED-3073 on enclosed inquiry slip



SPRACO NOZZLES

Write for NOZZLE CATALOG to

SPRAY ENGINEERING CO.

106 CENTRAL STREET • SOMERVILLE 45, MASS.

For more details circle NED-3074 on enclosed inquiry slip

New Literature—Continued

Air Diffusers

Anemostat Corp. of America—68-page illustrated selection manual "Anemostat Draftless Aspirating Air Diffusers" tells how to calculate required air volume and explains technique of locating diffusers and determining number of units required. Selection chart shows characteristics of 13 different diffuser types and presents application data.

For more details circle NED-3075 on enclosed inquiry slip

Unit Loading of Paper Stock

Addison-Semmes Corp.—36-page illustrated manual "Expendable Pallets at Work in the Paper Industry" offers information on use of expendable corrugated fiberboard pallets in shipping and storing roll and sheet paper stock of various types and sizes. Case histories of actual shipments are accompanied by photographs and sketches that indicate palletizing and loading procedure.

For more details circle NED-3076 on enclosed inquiry slip

General-Purpose Hoists

American Hoist & Derrick Co.—Illustrated 12-page catalog 100-H-40 and 16-page catalog 100-H-55 describe 5 to 40-hp and 50 to 100-hp general purpose hoists with capacities of 2500 to 4000-lb and 5500 to 10,000-lb single line pulls, respectively. Details of mechanical parts and assemblies as well as applications are covered.

For more details circle NED-3077 on enclosed inquiry slip

Aluminum Paints

Skybryte Co.—"One Aluminum Paint Can't Do Everything" is title of 4-page illustrated bulletin which gives application, property and price data on six Skyco aluminum paints. Types for resisting corrosion, heat, acid and alkalies; for interior and exterior use; for finishing rusted chain link fences and for general utility are described.

For more details circle NED-3078 on enclosed inquiry slip

Plastics Molding Machines

Hydraulic Press Mfg. Co.—"Profits from Plastics" is title of 20-page illustrated booklet which describes series of injection and compression molding machine installations in plastic molding industries and tells production experiences of several prominently known manufacturers. Injection machines range in capacity from 4 to 48 oz and compression presses from 50 to 2500 tons.

For more details circle NED-3079 on enclosed inquiry slip

Cold-Rolled Spring Steels

Sandvik Steel, Inc.—32-page illustrated catalog No. 50 gives complete data on 133 cold-rolled and unhardened sizes and 652 cold-rolled hardened and tempered sizes of strip steels. Thickness, width, degree of hardness, type of edges and weight per hundred lineal feet are given for each size.

For more details circle NED-3080 on enclosed inquiry slip

Tool & Instrument Cases

Warwick Products Co.—Details of typical custom made instrument and other wooden cases are presented in 4-page illustrated folder "Dress Up—Protect Your Products." Described are drill, meter and testing equipment cases.

For more details circle NED-3081 on enclosed inquiry slip

Diesel Engines

Nordberg Mfg. Co.—12-page illustrated bulletin No. 173 gives operating and application information on single-acting two-cycle stationary and marine diesel engines which are available with 5 to 12 cylinders and with ratings of 3570 to 8500 hp at normal speed of 164 rpm.

For more details circle NED-3082 on enclosed inquiry slip

Weldments

American Welding & Mfg. Co.—Advantages of flash butt welding by controlled techniques and typical product applications are shown in 20-page illustrated booklet No. CA-50-75. Products and subassemblies described range in diameter from 4 to 100 in. and up to 16 miles in length.

For more details circle NED-3083 on enclosed inquiry slip

Construction Paints

Goodyear Tire & Rubber Co., Chemical Div.—Techni-Guide 517 deals with use of Pliolite S-5 resin in exterior and concrete paints and gives formulation, preparation and properties. Bulletin C-102 discusses synthetic Chemigum Latex 101 vehicle for interior wall finishes which makes possible use of water as thinner.

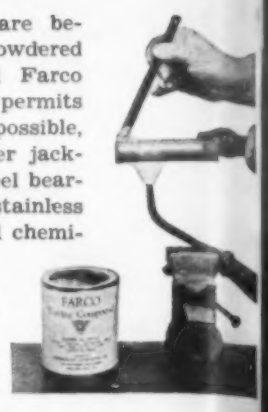
For more details circle NED-3084 on enclosed inquiry slip

Antivibration Mounts

Barry Corp.—Unit type air-damped Barry-Mounts and mounting bases for protection of electronic equipment and other sensitive apparatus against shock and vibration encountered in aircraft applications are described in 8-page illustrated catalog No. 502. Listings include units conforming to U. S. Government specifications.

For more details circle NED-3085 on enclosed inquiry slip

TINS ALL METALS



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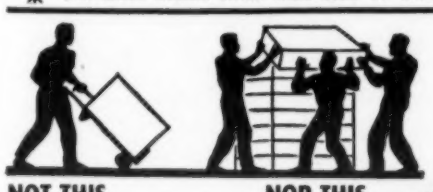
For more details circle NED-3086 on enclosed inquiry slip



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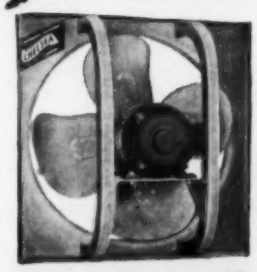

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For more details circle NED-3091 on enclosed inquiry slip

New Literature—Continued

Belt Conveyor Systems

Transall Inc.—Covering belt conveyor systems for handling coal, rock, slag, sand, gravel, ore and other bulk materials, 4-page illustrated bulletin "Out of the Hills and Far Away" describes and lists specifications of troughing and flat belt idlers.

For more details circle NED-3092 on enclosed inquiry slip

Vertical Speed Reducers

Cleveland Worm & Gear Co.—8-page illustrated bulletin No. 125 presents two new vertical speed reducers with gear shaft upward and gear shaft downward. These units are suited for driving such equipment as agitators and mixers and for use in conjunction with supplementary low-speed spur gear drives, without outboard bearings.

For more details circle NED-3093 on enclosed inquiry slip

Bending Presses

Cleveland Crane & Engineering Co.—Design and construction features as well as specifications of Steelweld presses for bending, braking, punching, blanking, drawing and corrugating are included in 8-page illustrated form No. 2010-E.

For more details circle NED-3094 on enclosed inquiry slip

Protective Masonry Coating

Prufcoat Laboratories, Inc.—Two illustrated bulletins "The Skyscraper that Came to Prufcoat" and "Pruftite" explain protection afforded by these two coatings. Prufcoat protects masonry from attack by weather and atmospheric corrosion, while Pruftite controls water seepage and dampness, above or below grade, on interior of exterior walls of masonry.

For more details circle NED-3095 on enclosed inquiry slip

Aluminum Cleaners

Diversey Corp.—12-page illustrated file folder No. 49D describes new and improved process for preparing aluminum and its alloys for spot welding. Case histories and step-by-step procedures are presented. Illustrated 4-page bulletin 49C discusses advantages and applications of No. 36 alkaline nonetching aluminum cleaner which removes inks and soil swiftly and completely.

For more details circle NED-3096 on enclosed inquiry slip

Bearing Installation & Maintenance

Anti-Friction Bearing Distributors Association—20-page illustrated guide book entitled "Installation—Maintenance—Removal of Anti-Friction Bearings" describes various types of bearings and their components, effect of dirt on bearing operation, cleaning methods, installation and removal procedures, lubrication and storage.

For more details circle NED-3097 on enclosed inquiry slip

Chemical Feeders

Black, Sivalls & Bryson, Inc.—16-page illustrated bulletin part 2, section 8, catalog 54 explains features, applications and operation of self-contained automatic chemical feeders which deliver precise quantities of chemicals required in industrial processes.

For more details circle NED-3098 on enclosed inquiry slip

Speed Reducers

Dodge Mfg. Co.—16-page illustrated bulletin A-470 lists data to aid in selection of proper size Torque-Arm speed reducer for a given application. Only information needed is horsepower required and the speed and size of shaft to be driven. Tables are included to facilitate determination of size of V-belts and sheaves needed for the drives.

For more details circle NED-3099 on enclosed inquiry slip

Plastic

Westinghouse Electric Corp.—36-page illustrated Micarta data book No. B-3184-D tabulates grades and forms in which this industrial plastic is supplied, together with chemical, mechanical and electrical properties of each. Standard shapes and sizes as well as available finishes are covered.

For more details circle NED-3100 on enclosed inquiry slip

Auto & Insulated Transformers

Nothelfer Winding Laboratories—Details of line of auto and insulated transformers are given in 8-page illustrated bulletin No. 150. Covered are open-frame, cased, channel and end bell cased electrical tranformers with ratings from 0.01 to 300 kva, 25 to 400 cycles and one, two or three phase.

For more details circle NED-3101 on enclosed inquiry slip

Aeronautical Letter Symbols

Recommended standard letter symbols for 400 primary and secondary concepts are presented in 20-page technical bulletin Z-10.7-1950. Many of these American Standard letter symbols for Aeronautical Sciences are in agreement with American Standards for other phases of science and engineering. Copies available at $1.25 from American Standards Association, 70 E. 45th St., New York 17, N. Y.

For more details circle NED-3102 on enclosed inquiry slip

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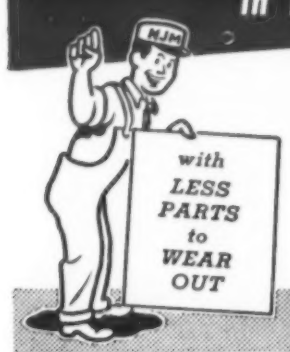

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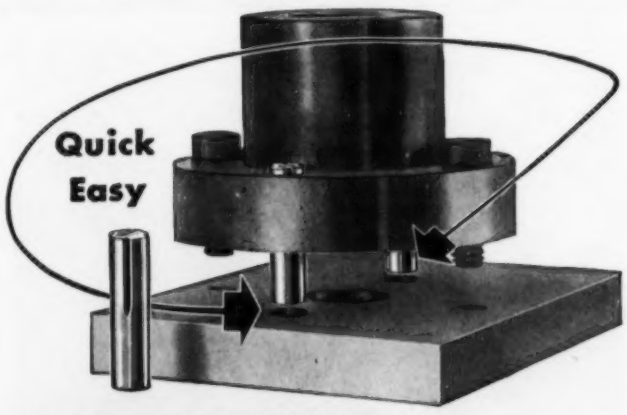

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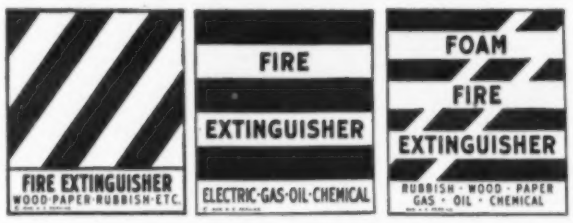

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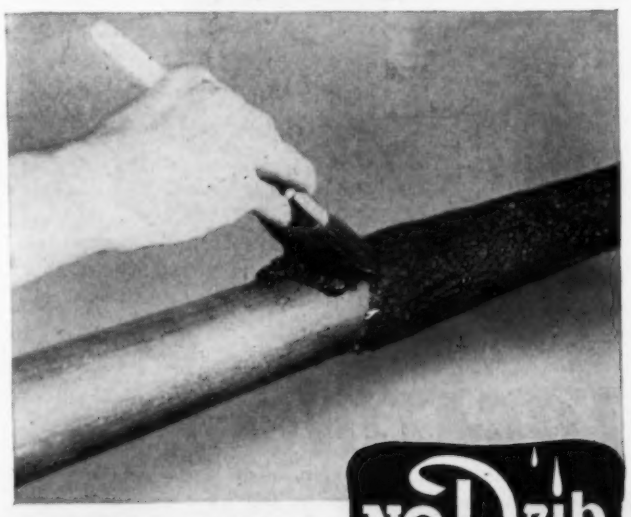

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The superiority of Alvey-Ferguson Engineered equipment is exemplified by this stainless steel machine which has an acid-resistant pump.

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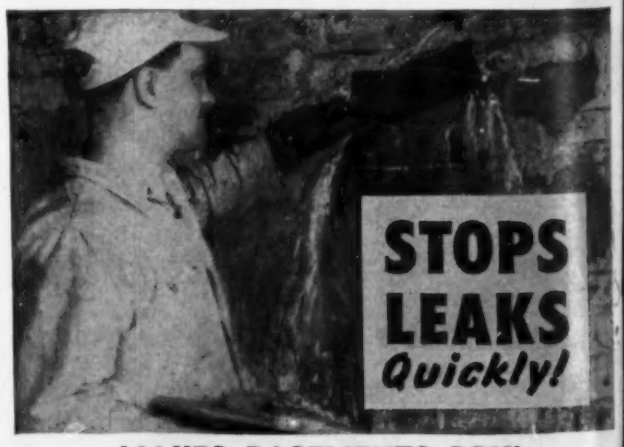

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